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JOHNSTONS' MAP OF SCOTLAND.

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Mycologia Scotica.

THE FUNGI OF SCOTLAND

AND THEIR

GEOGRAPHICAL DISTRIBUTION.

BY

REV. JOHN STEVENSON.

EDINBURGH:

PRINTED FOR THE

CRYPTOGAMIC SOCIETY OF SCOTLAND.

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DEDICATION.

Dear Mr. Berkeley,—

It is with very sincere pleasure that I dedicate this volume to you, as an acknowledgment that Scotland owes to you her progress in the study of Mycology, and as a memorial of personal regard.

To yourself I gladly attribute much of the value of this work: I alone am responsible for its imperfections.

I remain,

Dear Mr. Berkeley,

Very sincerely yours,

JOHN STEVENSON.

Glamis, *August* 29, 1879.

PREFACE.

No apology is needed for the issue of this work, no similar one having preceded it.

INTRODUCTION.

Progress of Mycology in Scotland.—The study of Mycology in Scotland is of comparatively recent origin. The first to give it a prominent place in Cryptogamic literature was Greville. In 1823 he commenced the "Scottish Cryptogamic Flora," which was issued in monthly parts during the following six years, and was ultimately published in six octavo volumes. For accuracy and beauty in the delineation of structural details the work remains unrivalled.

In the preface to his "Flora Edinensis," which is dated January 1824, we find him stating that "scarcely half-a-dozen species were on record." The contrast between this statement and the lists of species of which detailed descriptions are given in the latter part of the volume, is perhaps the most suggestive comment on the labours of Greville in this department of botanical research.

Contemporary with Greville, the only name which is worthy of special mention is that of Carmichael of Appin. His labours, as a collector, were chiefly confined to a period embracing the years from 1824 to 1827. During these years he succeeded in making many additions to the Mycological Flora of Scotland. The only record of his work which remains to us is to be found in Greville's "Cryptogamic Flora," and in the fifth volume of the "English Flora" of Smith, by the Rev. M. J. Berkeley.

In the local Floras of Berwickshire and Forfarshire we have the results of the limited investigations of Johnstone and Gardiner.

Among the names of Scottish Mycologists, who remain to us only in memory, one of the most noteworthy is that of Jerdon. At a period when, as he says, "too little attention is paid by British botanists to the class Fungi," he devoted an amount of time and study to the subject, which has resulted in the valuable lists published in the "Proceedings of the Berwickshire Naturalists' Club" for 1863. These lists are the results of his observations during a period of about ten years, and they contain various species which were previously unknown in Britain.

Of Scottish Cryptogamists who are still living, the name of Professor Dickie, of Aberdeen, will be more permanently known in connection with other branches of botany, specially, perhaps, in his later labours in connection with Algae. The results of his researches among Fungi are recorded in his "Botanical Guide to the Counties of Aberdeen, Banff, and Kincardine."

At a time when there were no other practical students in the field, the Rev. J. Keith of Forres, like Jerdon, kept the subject alive, and did much to give an impulse to the study of Mycology, which he still prosecutes with unabated vigour and success. He has published from time to time, in the "Scottish Naturalist," lists of "Fungi found within the province of Moray," which have been reprinted in separate form.

Since the "Cryptogamic Society of Scotland" was instituted in 1874, Mycological research has been prosecuted with increased enthusiasm. Sufficient evidence of this will be found in the following pages, in the number of new species, and of

species new to the British Flora, which have been discovered.* It must not be forgotten, however, that the Rev. M. J. Berkeley has been the moving spirit of Mycological study in Scotland from the time of Greville until now, and that to him its success is in large measure to be attributed.

Aim of the Work.—The objects of the following lists are chiefly these: (1) to record the species which have been found in Scotland, and (2) to form a contribution to our knowledge of the geographical distribution of Fungi.

Descriptions are given of all species found in Scotland since the publication of Cooke's "Handbook of British Fungi" in 1871.

Arrangement and References.—In recording species it has been considered advisable to give such references for botanical description as may be useful to the student. In order not to multiply these unnecessarily I have limited them, for the most part, to the later works on the subject. By reference to these, fuller information in regard to descriptive literature will be obtained.

It may seem strange, perhaps, that in a work on Scottish Fungi more special reference has not been made to the works of Greville. This, however, would involve a record of synonyms, which is beyond the purpose of the present work. Where changes in nomenclature have been effected, reference must be made to the works quoted for information regarding the history of such changes.

Exceptions to this will be found in the Order *Myxogastres*, in several genera, particularly of *Coniomycetes*, and in the Order *Sphæriacei*. In the case of *Myxogastres*, I have

* Since the publication of Cooke's "Handbook" in 1871, 391 species have been added to the Cryptogamic Flora of Scotland. Of these 107 are new species, 192 new to the British Flora, and 92 species found in England previous to their discovery in Scotland.

followed the classification and nomenclature of Professor Rostafinski in his "Monograph" on the "Mycetozoa," which will doubtless now take the place of previous literature. A translation of the "Monograph," which has unfortunately been written in Polish, in so far as it relates to British species, has been published by Dr. M. C. Cooke under the title of "Myxomycetes of Great Britain." This is to be regarded as a revision of the portion of the "Handbook" embracing the "Myxogastres;" and, as it must be in the hands of the practical student, I have throughout referred to it without giving detailed descriptions.

At first Professor Rostafinski made two primary divisions: *Exosporeæ*, comprising species in which spores are developed externally on uncovered spore-bearers; and *Endosporeæ*, including those in which spores are developed internally, covered at first by a protective membrane or sporangium. In a "Supplement" to the "Monograph" he has abandoned the first of these, so that the basis of classification is simplified, and confined almost entirely to features of internal structure. The first ground of classification is the colour of the spores, from which two sections are obtained:—(1.) *Amaurosporæ*, including species which have violet or brownish-violet spores; and (2.) *Lamprosporæ*, vaguely defined as "diversely coloured, never violet." The next feature in Rostafinski's system is the *Capillitium*. The two sections determined by the colour of the spores are divided each into two sub-sections, according to the presence or absence of a *capillitium*. Differences in detail are determined chiefly by the characters of the *capillitium* and of the *columella* where these are present. Such a system of classification, though in some respects defective, is undoubtedly more satisfactory than that which had regard only to external features, as will

readily appear on examination of the "Analytical Key for the Determination of the Genera," which will be found at the beginning of the "Monograph." So complete an alteration of system in classification has been followed by considerable changes in nomenclature. Plants which were formerly regarded as possessing distinctive features are grouped under one species. Those who are familiar with species of *Didymium*, *Physarum*, *Stemonitis*, or *Trichia* will be surprised, on turning to the "Monograph," to find the revolution which has been effected. I have therefore considered it advisable to note the synonyms under which species recorded have appeared in the "Handbook;" as, otherwise, plants which are familiar to Scottish Mycologists might appear to be omitted.

In several genera of *Coniomycetes*, changes in arrangement and nomenclature have been adopted from the Appendix to the fourth edition of Cooke's "Microscopic Fungi," which contains a rearrangement of these groups after a monograph by M. F. de Waldheim.

Considerable variation from previous arrangement will be found in the order *Sphæriacei*. The genus *Sphæria* contained many species, which undoubtedly were of such a nature as to require separation under new genera. A synopsis of a new arrangement of this order has been prepared by Dr. M. C. Cooke and Mr. C. B. Plowright, and published in "Grevillea," vol. vii. p. 77. As might be anticipated from these authors, the proposed rearrangement is sound in principle, though it will doubtless give rise to some controversy, differing, as it does, from the system of many of the Continental botanists. It is no part of the present work to follow out details of sections and subdivisions. I have therefore had less hesitation in adopting the general outline of the proposed arrangement. It is probable that ere long consider-

able changes will be effected in its details. A critical examination of existing species will, doubtless, result in the exclusion of some, and the amalgamation of others; but a general acceptance at the hands of British Mycologists is to be anticipated for a natural system, which, with all its defects, is preferable to one which is purely artificial, and therefore, in great measure, arbitrary.

Habitats.—Accurate observation of the habitats of Fungi is essential to a right appreciation of their influence in the economy of nature. There are few decaying substances on which they are not to be found. On living and decaying vegetable matter they may be regarded as universal, while many animal and even inorganic substances seem to supply conditions for their development. While many of the larger Fungi are singularly capricious in their recurrence, growing perhaps abundantly during one season, and then disappearing altogether for a succession of years, it will be found that, on the whole, they are exceedingly regular, in many instances unvarying in the choice of their homes. Greater variation in this respect exists among *Hymenomycetes* than in any of the other families. It is just as true, however, that an agaric of rare beauty and delicacy will confine itself to the shade of a fern, or that a *Clavaria* will never pass from under the shelter of a pine, as that an *Æcidium* will refuse to be separated from a primrose, or a *Puccinia* from a violet. In the case of wood-loving agarics, while it is true that many will be found associated with particular trees, it would be misleading to note them as confined to these. The agarics of beech, oak, or pine woods will be found to vary on the whole uniformly; but many are to be found in all of them. The record of habitats, therefore, particularly of the larger Fungi, must in many instances be general.

Seasons of Growth.—It will usually be found of importance to note the month in which the larger and more fleshy Fungi first appear, as with some exceptions they continue to flourish till the frosts of early winter cut them down. Many, such as resupinate *Polypori* and *Corticia*, develop themselves chiefly during the later months of autumn and throughout the winter; while others, such as *Sphæriæ*, reach their perfection chiefly during early spring. In numerous cases the habitat must determine the season of growth. Those, for instance, which are confined to living leaves, must be sought for during the summer or early autumn. Others will appear only after the leaves have fallen, and are in various stages of decay. It must not be supposed that the species which are recorded in these lists are confined exclusively to the months specified. The periods of growth of the commoner species will be found, on the whole, to be accurately indicated; but in the case of many of the less frequent species, which I have not had the opportunity of observing from year to year, I have simply noted the month in which they were gathered.

Altitudes.—In recording altitudes it was at first intended to note the height above the sea-level of all species. This, however, would present so imperfect an account as to be valueless. I have considered it advisable, therefore, to confine such notes to species which, however common at a lower level, have occurred at, or above the range of 1000 feet.

Types.—In estimating the characteristic features of a Flora, it is always desirable to indicate, by reference to different types, the regions in which the various species predominate. In the case of Fungi, however, our knowledge is wholly insufficient to warrant the attempt, with regard even to approximate accuracy.

Geographical Distribution.—One of the chief objects of

the present work, as I have already stated, is to offer a contribution to our knowledge of the geographical distribution of Fungi. The field is a vast one, and the Mycological Flora of the larger portions of the world has yet to be investigated. For much interesting information on this subject the student may refer to a paper by Mr. E. P. Fries in "Annales des Sciences Naturelles," 1861, xv. p. 10, and to a chapter in the volume "Fungi" of the "International Scientific Series," chap. xiii. p. 266.

As might be anticipated from the long labours of Fries and of Berkeley, the Mycological Floras of Europe, particularly of Northern Europe and of England, are better known than those of any other countries. Of extra-European Floras perhaps the best known is that of America. Incidental notices, recording the results of local researches, make up our information regarding other regions. I have noted as far as possible the different countries in which the species contained in the following lists have been found.

By the kind permission of Dr. Buchanan White, to whom I am indebted for the outlines of the accompanying map, I have adopted the principle of the method followed by him in his Catalogue of the Insects of Scotland, published in the pages of the "Scottish Naturalist." The object of this method is to present natural divisions, such as are obtained from the drainage of the country, instead of merely arbitrary districts determined by the outlines of counties. With this view Scotland has been divided into ten districts which have been determined by the basins of the larger rivers, as follows:—

Eastern Division.—Tweed; Forth; Tay; Dee; Moray; Sutherland, including Orkney and Shetland.

Western Division.—Solway; Clyde, including Arran, Islay,

and the adjacent islands; Argyle, including Mull, Tiree, and the adjacent islands; West Ross, including Skye and the adjacent islands.

Reference to the map will show the limits of these districts. Our information is somewhat more extended for the Eastern than for the Western division of Scotland. While this is the case, and while many of the commoner species are doubtless to be found in districts which are blank, we may claim to have already a fair representation of the Mycological Flora of the country. Only a small portion of what may be regarded as the least fruitful field, in the extreme North, remains unrepresented.

Authorities and Correspondents.—It may be convenient to specify at once my sources of information, and the names of correspondents who have kindly aided me by their reports, and by the communication of specimens.

Works chiefly referred to:—

Berkeley.—"English Flora," vol. v.; "Outlines of British Fungology."

Berkeley and Broome.—"Notices of British Fungi," in "Annals and Magazine of Natural History."

Carmichael.—In Greville's Works and "English Flora."

Cooke.—"Handbook of British Fungi;" "Microscopic Fungi," fourth edition; "Mycographia, seu Icones Fungorum;" "The Myxomycetes of Great Britain."

Dickie.—"Botanists' Guide to the Counties of Aberdeen, Banff, and Kincardine."

Edinburgh Herbarium.

Fries.—"Systema Mycologicum;" "Hymenomycetes Europæi, s. Epicriseos Systematis Mycologici," second edition.

Gardiner.—"Flora of Forfarshire."

Greville.—"Scottish Cryptogamic Flora;" "Flora Edinensis;" "Exsiccati," in Edinburgh Herbarium.

Klotzsch.—"Exsiccati," in Edinburgh Herbarium, and Hooker's Herbarium.

Jerdon.—"Proceedings of the Berwickshire Naturalists' Club" for 1863.

Johnstone.—"Flora of Berwick-upon-Tweed," vol. ii.

Journals.—"Annals and Magazine of Natural History;" "Journal of Botany;" "Journal of the Linnæan Society;" "Transactions of the Botanical Society" of Edinburgh; "Scottish Naturalist;" "Grevillea."

Keith.—"List of Fungi of the Province of Moray."

Incidental references to the works of Continental botanists, and to foreign journals, will be found in the text.

Correspondents.—Rev. M. L. Anderson (St. Andrews); Professor Balfour (Edinburgh); Professor Bayley Balfour (Glasgow); Rev. M. J. Berkeley (Sibbertoft); W. B. Boyd, Esq. (Ormiston); C. E. Broome, Esq. (Bathcaston); A. Brotherston (Kelso); Dr. Bull (Hereford); Dr. Capron (Shere); Mrs. Gilchrist Clark (of Speddock); Dr. M. C. Cooke (London); Professor Alexander Dickson (Edinburgh); Rev. J. Fergusson (Fern); Professor Elias Fries (Upsala); Colonel Drummond Hay (Seggieden); Miss G. E. Johnstone (Inveraray Castle); Rev. J. Keith (Forres); Dr. Lauder Lindsay (Perth); Sir Thomas Moncreiffe, Bart. (Moncreiffe); Messrs. J. M'Andrew (New Galloway); W. M. Ogilvie (Dundee); W. Phillips (Shrewsbury); C. B. Plowright (Kings Lynn); J. Sadler (Edinburgh); J. Sim (Strachan); Worthington G. Smith (London); Dr. James Stirton (Glasgow); M. Terry, Esq. (Slough); Rev. J. E. Vize (Forden); Dr. Buchanan White (Perth).

I have not thought it necessary, with some exceptions, to specify authorities or particular localities, except in the case of discoverers of new species, of species previously unknown as British, and of species which have been found by one individual only. In all such cases the authorities and localities are given. In some instances a single district is recorded, while no locality is given. In every such case the species has been found, in various localities within the district, by several independent observers.

No attempt has been made to determine the comparative frequency or rarity of species. Perhaps the best indication of this at present is the number of districts recorded under each. Further investigation, however, will doubtless prove that species which have as yet been found only in one locality are not uncommonly distributed. It must be borne in mind also that, in many instances, plants which have been found in nearly all of the districts are by no means common, often infrequent and extremely local.

As rigid accuracy has been aimed at throughout, I have excluded every species regarding which any doubt has existed, with the exception of one or two instances in which the nature of the doubt has been recorded. I have marked with an asterisk (*) those which I have actually gathered, and for which I am personally responsible, as, with very few exceptions, my own collections have passed through the hands of the Rev. M. J. Berkeley. It is scarcely necessary to point out the high value which this imparts to these lists. In no instance, so far as I am aware, have others recorded a plant, where any doubt or difficulty existed, without consultation with competent authorities.

I have already, in a letter of dedication, acknowledged my deep obligation to the Rev. M. J. Berkeley. In addition, I

have to record my special obligations, for many of the details which are necessary for the completion of such a work, to Dr. M. C. Cooke, Messrs. Phillips, Plowright, and Keith.

It only remains for me to thank the Fellows of the Cryptogamic Society, and other Subscribers, who have enabled me to issue this work.

J. S.

THE FUNGI OF SCOTLAND.

DIVISION I.—SPORIFERA.

FAMILY I.—HYMENOMYCETES.

Order I.—AGARICINI.

Genus I.—AGARICUS L.

SERIES I.—LEUCOSPORI. *Spores White.*

SUBGENUS 1.—AMANITA FR.

1. A. phalloides * Fr. *Hym. Eur. p.* 18. *C. Hbk. No.* 5.
In woods. Aug.—Oct.
East. Tweed —— Tay —— Moray ——
West. Solway Clyde —— ——
England. Europe. America. New Zealand.

2. A. vernus * Fr. *Hym. Eur. p.* 18. *C. Hbk. No.* 4.
In woods. July.
East. —— —— Tay. —— —— ——
West. —— Clyde —— ——
England. Europe.

3. A. mappa Fr. *Hym. Eur. p.* 19. *C. Hbk. No.* 6.
In woods.
East. —— —— —— —— —— ——
West. —— Clyde —— ——
Inveraray. Miss G. E. Johnstone.
England. Europe.

4. A. muscarius * L. *Fr. Hym. Eur. p.* 20. *C. Hbk. No.* 7.

In woods. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——

West. Solway Clyde Argyle Ross

England. Europe. America.

5. A. pantherinus * D. C. *Fr. Hym. Eur. p.* 21. *C. Hbk. No.* 9.

In woods. Sept.—Oct.

East. —— Forth Tay —— —— ——

West. —— Clyde —— ——

England. Europe. America. St. Helena.

6. A. excelsus * Fr. *Hym. Eur. p.* 21. *C. Hbk. No.* 8.

In woods. July.

East. Tweed —— Tay Dee Moray ——

West. —— Clyde —— ——

England. Europe. America.

7. A. strobiliformis Vitt. *Fr. Hym. Eur. p.* 21. *C. Hbk. No.* 10.

In woods. July.

East. —— —— Tay —— Moray ——

West. —— —— —— ——

England. Europe. Java.

8. A. rubescens * Pers. *Fr. Hym. Eur. p.* 23. *C. Hbk. No.* 11.

In woods. June—Nov. 1500 ft.

East. Tweed Forth Tay Dee Moray ——

West. —— Clyde Argyle Ross

England. Europe. America.

9. A. spissus * Fr. *Hym. Eur. p.* 23. *C. Hbk. No.* 12.

In woods. July—Sept.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis. J. S.

England. Europe.

10. A. asper * Fr. *Hym. Eur. p.* 24. *C. Hbk. No.* 13.

In woods. Aug.—Oct.

East. —— —— Tay —— —— ——

West. —— —— —— Ross

England. Europe. America.

11. A. magnificus * Fr. *Hym. Eur. p.* 25. *B. & Br. No.* 1631.

Pileus convex then flattened, thin, nearly naked, reddish, margin striate, *flesh reddish;* stem with a pith, then hollow, almost equal, squamulose, ring falling away; volva obliterated; gills *attenuato-decurrent.*

Allied to A. rubescens. The pileus, however, has no warts as in that species, but sometimes a few superficial scattered flocci.

In Scotch fir-wood. July.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis, Warren wood, 1876. J. S.

Europe.

12. A. vaginatus * Bull. *Fr. Hym. Eur. p.* 27. *C. Hbk. No.* 1.

In woods. June—Nov. 1200 ft.

East. Tweed Forth Tay Dee Moray ——

West. Solway Clyde Argyle Ross

England. Europe. America. India. Ceylon. Australia.

Var. **fulvus** * Schaeff f. 95. Common.

Var. **albida** * (A. nivalis Grev.). On the summits of Brae Riach, Ben-na-Bourd, Cairngorm, &c. Greville. Glamis, Hunter's Hill. J. S.

Greville speaks of it "as the most alpine species of fungus," growing "on the bleak summits of the loftiest Grampians." It is not, however, exclusively alpine. I have gathered it at Glamis at an elevation of 400 ft., and, except in colour, which is snow-white, it does not differ from *A. vaginatus* more than the common variety, *fulvus.*

13. A. strangulatus * Fr. *Hym. Eur. p.* 27. *A. Cecilia, C. Hbk. No.* 2.

In woods. July—Sept.

East. —— —— Tay —— —— ——

West. —— Clyde —— ——

England. Europe.

2. LEPIOTA Fr.

14. A. procerus * Scop. *Fr. Hym. Eur. p.* 29. *C. Hbk. No.* 16.

In woods. Aug.—Oct. 1000 ft.

East. Tweed Forth Tay Dee Moray ——

West. Solway Clyde —— ——

England. Europe. America. Australia. Tasmania. Ceylon.

15. A. rhacodes* Vitt. *Fr. Hym. Eur. p.* 29. *C. Hbk. No.* 17.
In woods. Sept.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

16. A. excoriatus Schaeff. *Fr. Hym. Eur. p.* 30. *C. Hbk. No.* 18.
In woods. June—July.
East. —— —— —— Dee —— ——
West. —— —— —— ——
New Pitsligo. Rev. J. Fergusson.
England. Europe. India. Australia.

17. A. acutesquamosus* Weinm. *Fr. Hym. Eur. p.* 31. *C. Hbk. No.* 21.
In gardens and hot-beds. Sept.—Oct.
East. —— —— Tay ——. Moray ——
West. —— Clyde —— ——
England. Europe. America.

18. A. meleagris Sow. *Fr. Hym. Eur. p.* 31. *C. Hbk. No.* 24.
In hot-beds. May—Oct.
East. —— —— —— —— —— ——
West. —— Clyde —— ——
Erskine. Klotzsch.
England.

19. A. hispidus* Lasch. *Fr. Hym. Eur. p.* 32. *C. Hbk. No.* 22.
In woods. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

20. A. clypeolarius Bull. *Fr. Hym. Eur. p.* 32. *C. Hbk. No.* 25.
In woods and shaded borders.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America. Australia. New Zealand. Cuba.

21. A. cristatus* A. & S. *Fr. Hym. Eur. p.* 32. *C. Hbk. No.* 26.
In open woods and pastures. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Ceylon. Tasmania.

22. **A. cepæstipes** Sow. *Fr. Hym. Eur. p.* 35. *C. Hbk. No.* 30.

On tan in hot-houses. Aug.—Sept.

East. —— Forth —— —— Moray ——
West. —— Clyde —— ——
England. Europe. America. Ceylon.

23. **A. carcharias** * Pers. *Fr. Hym. Eur. p.* 36.

Pileus fleshy, convex then plane, umbonate, granulose, *flesh-coloured*, as well as the stuffed, then hollow, somewhat bulbous, squamulose stem; *gills adnexed*, white. Taste bitter or nauseous.

In pine woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1874. J. S.
England. Europe.

24. **A. cinnabarinus** A. & S. *Fr. Hym. Eur. p.* 36. *B. & Br. No.* 1402.

Pileus fleshy, soon flattened, obtuse, granuloso-furfuraceous, persistently *cinnabar-colour*, 2–3 inches broad; stem stuffed, somewhat bulbous, clad with red scales below the inferior ring; *gills free*, lanceolate, white. Flesh pallid; taste mild.

In pine woods. Sept.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——
Europe.

Var. **Terreii** B. & Br. *No.* 1183. *Fr. Hym. Eur. p.* 36.

Pileus somewhat hemispherical, bright-tawny, pulverulent, rough with minute warts, 1–2 inches broad; stem nearly equal, clothed with furfuraceous, often cylindrical, scales of the same colour; ring at length torn in fragments; gills white, narrow, remote, not branched. Spores ·0002 in. long by ·00015 wide.

On sandy ground.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. M. Terry.

25. **A. granulosus** * Batsch. *Fr. Hym. Eur. p.* 36. *C. Hbk. No.* 31.

In woods and pastures. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Australia. Ceylon.

26. A. amianthinus* Scop. *Fr. Hym. Eur. p.* 37.

Pileus somewhat fleshy, convex then plane, somewhat umbonate, furfuraceo-granulose, *ochraceous, flesh yellow;* stem equal, slender, squamulose; *gills adnate*, crowded, white, turning yellow.

The adnate gills and yellow flesh, especially of the stem, distinguish it from *A. granulosus.*

In woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S. Rannoch. Kinnoull. Dr. B. White.
England. Europe.

27. A. polystictus* Berk. *Fr. Hym. Eur. p.* 37. *C. Hbk. No.* 32.

In grassy places. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England.

28. A. sistratus Fr. *Hym. Eur. p.* 37. *B. & Br. No.* 1185.

Pileus fleshy, thin, campanulate, obtuse, *pruinose with shining atoms*, pallid, but turning to yellowish or flesh-colour, appendiculate round the margin with the fibrillose veil: stem somewhat fistulose, equal, and, as well as the inferior veil, fibrillose; gills nearly free, ascending, white. Slender.

On sandy ground.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. M. Terry. Rev. J. Keith.
Europe.

29. A. medullatus* Fr. *Hym. Eur. p.* 38. *B. & Br. No.* 1732.

Pileus fleshy, convex, plane, umbonate, smooth, viscid, margin *toothed with the hanging veil*, white, becoming slightly yellowish, flesh thickish, soft; stem enclosing a distinct pith which is at length fistulose, squamulose beneath the inferior obsolete veil, *dry;* gills free, crowded, ventricose.

In woods. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1874. J. S.
Europe.

30. A. gliodermus * Fr. *Hym. Eur. p.* 39. *C. Hbk. No.* 33.

In thickets. July—Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. Ballinluig. J. S.
England. Europe.

3. ARMILLARIA Fr.

31. A. robustus A. & S. *Fr. Hym. Eur. p.* 41. *B. & Br. No.* 1502.

Very variable in size and stature; pileus fleshy, compact, convexo-plane, unequal, smooth, chestnut-red, tawny, or bay-brown, margin fibrillose, as well as the stem, which is solid, *short, attenuated downwards*, ½–¾ inch thick at the base, 1 inch at the apex, rooting, white above the inferior ring; gills emarginate, reaching the stem, whitish. Taste and smell exactly like that of *Polyporus squamosus.*

In woods.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.
England. Europe.

32. A. aurantius Schaeff. *Fr. Hym. Eur. p.* 41. *B. & Br. No.* 1335.

Pileus fleshy, convexo-plane, obtuse, innato-squamulose, viscid, somewhat orange; stem solid, equal, densely clad to the annular zone with crowded, somewhat concentric, *tawny-orange*, wart-like scales, about 2 inches long, 4 lines thick, varying a good deal in the nature and frequency of the scales; gills sinuato-adnexed, crowded, white, at length rufescent. Smell strong; taste bitter.

In pine woods. Sept.—Oct.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rothiemurchus, &c. Rev. J. Keith.
Europe.

33. A. melleus * Fl. Dan. *Fr. Hym. Eur. p.* 44. *C. Hbk. No.* 36.

On stumps and the ground. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross

England. Europe. America. Siberia. Australia.

34. A. mucidus * Schrad. *Fr. Hym. Eur. p.* 46. *C. Hbk. No.* 37.

On dead beech. Aug.—Nov.

East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America.

35. A. hæmatites * B. & Br. *No.* 1635.

Pileus hemispherical, liver-coloured, dry, slightly hispid, about 1 inch across; stem of the same colour, thickened downwards, solid, 2 inches high, ¼ inch thick at the base; ring spongy, scaly beneath; gills shortly decurrent. Like *A. subcavus*, it is analogous to *Lepiotæ*.

Among fir leaves. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1876. J. S.

4. TRICHOLOMA Fr.

36. A. equestris * Linn. *Fr. Hym. Eur. p.* 48. *C. Hbk. No.* 38.

In fir woods. Sept.—Nov.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. Palestine.

37. A. sejunctus Sow. *Fr. Hym. Eur. p.* 48. *C. Hbk. No.* 39.

In woods.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.
England. Europe. America.

38. A. portentosus Fr. *Hym. Eur. p.* 48. *C. Hbk. No.* 40.

In fir woods. Aug.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

39. A. fucatus * Fr. *Hym. Eur. p.* 49. *C. Hbk. No.* 41.

In woods, chiefly pine. Oct.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe.

40. A. resplendens * Fr. *Hym. Eur. p.* 49.

Pileus fleshy, convex then expanded, even, smooth, viscous, *when dry shining, margin straight*, white, often marked with glassy-green spots, the disc becoming yellowish; stem variable, sometimes bulbous, sometimes equal, ½ inch thick, solid, stout, smooth, or slightly

floccose at the apex, dry; gills emarginate, somewhat crowded. Smell pleasant; taste mild. The habit is that of *Hygrophorus eburneus.*

In woods. Sept.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith. Penicuik. J. S.
England. Europe. Siberia.

41. A. flavo-brunneus * Fr. *Hym. Eur. p.* 51. *C. Hbk. No.* 45.
In woods. Aug.—Sept.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

42. A. albo-brunneus * Pers. *Fr. Hym. Eur. p.* 51. *P. Hbk. No.* 47.
In woods. Sept.—Oct. 1500 ft.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

43. A. ustalis * Fr. *Hym. Eur. p.* 51. *C. Hbk. No.* 46.
In woods. Sept.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Siberia.

44. A. pessundatus Fr. *Hym. Eur. p.* 51. *C. Hbk. No.* 48.
In fir woods. Sept.—Oct.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Grantown. Rothiemurchus. Rev. J. Keith.
England. Europe.

45. A. rutilans * Schaeff. *Fr. Hym. Eur. p.* 53. *C. Hbk. No.* 49.
In pine woods. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe.

46. A. columbetta * Fr. *Hym. Eur. p.* 55. *C. Hbk. No.* 52.
In woods and pastures. Aug.—Nov.
East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America.

47. A. scalpturatus * Fr. *Hym. Eur. p.* 55. *C. Hbk. No.* 50.

In pine woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson. Glamis. J. S.
England. Europe.

48. A. imbricatus * Fr. *Hym. Eur. p.* 56. *C. Hbk. No.* 53.

In woods. Sept.—Nov.

East. Tweed —— Tay —— Moray ——
West. —— Clyde Ross ——

England. Europe.

49. A. vaccinus * Pers. *Fr. Hym. Eur. p.* 56. *C. Hbk. No.* 54.

In fir woods. Sept.—Oct.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross

England. Europe. America.

50. A. terreus * Schaeff. *Fr. Hym. Eur. p.* 57. *C. Hbk. No.* 57.

In woods, chiefly under beech. Aug.—Nov. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe.

51. A. saponaceus * Fr. *Hym. Eur. p.* 59. *C. Hbk. No.* 58.

In woods and pastures. Aug.—Oct.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe.

52. A. cartilagineus * Bull. *Fr. Hym. Eur. p.* 60. *C. Hbk. No.* 59.

In pastures. Aug.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Park. J. S.
England. Europe. New Zealand.

53. A. loricatus * Fr. *Hym. Eur. p.* 60. *B. & Br. No.* 1503.

Cartilaginous, tough ; pileus campanulate then convex, somewhat undulated, moist (slightly viscid), somewhat papillose, clothed (as in a cuirass) *with a thick, horny cuticle*, which is separable from the flesh, 1–2 inches broad, under a lens punctato-rugose, umber or livid-fuscous ; stem rather hollow, equal, rooting, striato-fibrillose, 2 3

inches long, brick-coloured-fuscous ; gills attenuato-free, crowded, pallid. Odour nauseous, but not soapy. Distinguished from all others by the cuticle of the pileus, which is 1 line thick, and which tends to separate from the flesh, so that the latter is simply a prolongation of the medulla of the stem, entering at the centre between the cuticle and the hymenophorum.

In mixed wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875. J. S.
Europe.

54. A. cuneifolius * Fr. *Hym. Eur. p.* 61. *C. Hbk. No.* 60.

In pastures. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S. Fern. Rev. J. Fergusson.
England. Europe.

55. A. murinaceus * Bull. *Fr. Hym. Eur. p.* 62. *C. Hbk. No.* 56.

In open woods and pastures. Aug.—Sept.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

56. A. virgatus * Fr. *Hym. Eur. p.* 62. *B. & Br. No.* 1504.

Rigid ; pileus fleshy, convexo-plane, somewhat umbonate, very dry, become smooth, cinereous, *streaked with innate black scales and lines*, margin at first naked, 2–4 inches broad ; stem solid, stout, somewhat tuberous, and without any trace of a veil, striate, smooth, white, 3 inches and more long, ½ inch thick ; gills emarginate, *crowded*, becoming hoary. When young the pileus appears as if clothed with evanescent fibrils, but is in itself smooth, only streaked with black lines, or sprinkled with superficial, black, *smooth* scales. Taste like gall, especially when young.

In mixed woods. Aug.—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith. Airlie. Rev. J. Fergusson.
Kinnoull Hill. J. S.
Europe.

57. A. sulphureus * Bull. *Fr. Hym. Eur. p.* 63. *C. Hbk. No.* 62.

In woods. Sept.—Oct.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— —— ——

England. Europe.

58. A. bufonius * Pers. *Fr. Hym. Eur. p.* 63. *C. Hbk. No.* 63.

In fir woods. Oct.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

59. A. lascivus * Fr. *Hym. Eur. p.* 64. *C. Hbk. No.* 64.

In mixed woods. Sept.—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

60. A. inamœnus Fr. *Hym. Eur. p.* 64. *C. Hbk. No.* 65.

In woods. Sept.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh Fungus Show, 1878.
England. Europe.

61. A. cerinus * Pers. *Fr. Hym. Eur. p.* 64. *B. & Br. No.* 1636.

Pileus fleshy, convexo-plane, *obtuse* or depressed, *become smooth*, even, about 1–1½ inch broad, generally of a rich brown colour, paler near the margin, flesh white; *stem stuffed, fibrilloso-striate*, smooth at the base (often fuscous); *gills* adnexed-retreating, *crowded, yellow.*

On lawn. June—July.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Manse, 1877. J. S.
Europe.

62. A. carneus * Bull. *Fr. Hym. Eur. p.* 65. *C. Hbk. No.* 68.

In woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Moncrieffe, 1875. J. S.
England. Europe. New Zealand.

63. A. cælatus * Fr. *Hym. Eur. p.* 66. *B. & Br. No.* 1192.

Very small; pileus slightly fleshy, convex, *umbilicate*, flocculose at length become smooth, then slightly cracked-rugose, fuscous, then very pale, scarcely 1 inch broad; stem flocculoso-stuffed, then hollow, equal, smooth, scarcely or slightly pruinose, fuscous, 1 inch

high, thickened above ; gills sinuato-adnate, crowded, dirty whitish. Spores subglobose, ·0003 × ·00015 in.

In woods. July.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1874. J. S.
England. Europe.

64. A. gambosus * Fr. *Hym. Eur. p.* 66. *C. Hbk. No.* 69.

In pastures. May—Aug.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe.

65. A. borealis Fr. *Hym. Eur. p.* 67. *A. monstrosus* Sow. *C. Hbk. No.* 71.

On the ground.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe.

66. A. amethystinus * Batt. *Fr. Hym. Eur. p.* 68. *B. & Br. No.* 1733.

Pileus fleshy, convexo-plane, obtuse, repand, smooth, even, moist, *spotted with blue*, margin wrinkled, paler ; stem solid. short, attenuated at the base ; gills somewhat adnate, crowded, white, becoming reddish.

In pine woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1875. J. S.
Europe.

67. A. tigrinus * Schaeff. *Fr. Hym. Eur. p.* 68. *C. Hbk. No.* 73.

On grassy ground on shore. June.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Elie, Macduff's Chapel, 1877. J. S.
England. Europe.

68. A. arcuatus Bull. *Fr. Hym. Eur. p.* 70.

Pileus soft, flattened, somewhat gibbous, even, smooth, moist, almost viscid, discoid, reddish-fuscous, turning very pale, disc blackish, margin thin, at first inflexed, *the flesh coloured ;* stem solid, firm, fibrilloso-squamulose, blackish downwards, bulbous, sometimes

exceedingly marginato-bulbous; gills arcuato-adnate (with a decurrent tooth) *and arcuate*, slightly undulated, crowded, fragile, white.

On the ground. Oct.—Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

St. Andrews, 1877, 1878. Rev. M. L. Anderson.
England. (Coed Coch, M. J. B.) Europe.

69. A. albus * Schaeff. *Fr. Hym. Eur. p.* 70. *C. Hbk. No.* 74.

In woods. Sept.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

70. A. acerbus * Bull. *Fr. Hym. Eur. p.* 71. *C. Hbk. No.* 75.

In woods. Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

71. A. militaris * Lasch. *Fr. Hym. Eur. p.* 71. *B. & Br. No.* 1506.

Pileus at first gibbous with white flocci at the involute margin, at length nearly plane or depressed, *compact*, flexuous, nearly smooth, viscous, *cinnamon*, margin even, 4–7 inches broad; stem solid, squamulose, fibrillose, pallid, somewhat bulbous at the base, 4½ inches long, even to as much as an inch thick, with thick radicle fibrils; gills emarginate, somewhat crowded, whitish, *at length with lurid spots*, torn. Odour and taste unpleasant.

In woods. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
Europe.

72. A. personatus * Fr. *Hym. Eur. p.* 72. *Lepista, C. Hbk. No.* 546.

In woods. Oct.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe. America. Siberia.

73. A. nudus * Bull. *Fr. Hym. Eur. p.* 72. *Lepista, C. Hbk. No.* 544.

In woods. Sept.—Nov.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America. Australia. Tasmania. Ceylon.

74. A. cinerascens Bull. *Fr. Hym. Eur. p.* 73. *Lepista, C. Hbk. No.* 545.

In woods.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe. Siberia.

75. A. grammopodius* Bull. *Fr. Hym. Eur. p.* 74. *C. Hbk. No.* 76.

In pastures and open woods. July—Oct.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe.

76. A. melaleucus * Pers. *Fr. Hym. Eur. p.* 74. *C. Hbk. No.* 77.

On the ground. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

77. A. brevipes Bull. *Fr. Hym. Eur. p.* 75. *C. Hbk. No.* 78.

In woods. Oct.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Penicuik. C. B. Plowright.
England. Europe. New Zealand.

78. A. humilis * Fr. *Hym. Eur. p.* 75. *C. Hbk. No.* 79.

In open woods. Aug.—Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Siberia.

79. A. subpulverulentus* Pers. *Fr. Hym. Eur. p.* 76. *C. Hbk. No.* 80.

In pastures and woods. Aug.—Oct.

East. —— Forth Tay —— —— ——
West. —— —— —— Ross

England. Europe. India.

80. A. sordidus Fr. *Hym. Eur. p.* 77. *B. & Br. No.* 1196.

Tough; pileus somewhat fleshy, campanulato-convex, then plane or depressed, somewhat umbonate, smooth, hygrophanous, margin at length slightly striate; stem stuffed, *fibrilloso-striate*, somewhat

incurved, thickened at the base; *gills rounded*, somewhat crowded, *violaceous*, then whitish or fuliginous, at length sinuato-decurrent. Often excentric. Spores pale ferruginous, ·0003 inches.

On earth, dung, &c. July—Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sanquhar. Rev. J. Keith.
England. Europe.

81. A. pædidus * Fr. *Hym. Eur. p.* 77. *B. & Br. No.* 1405.

Tough; pileus somewhat fleshy, campanulato-convex then flattened, *depressed around the conical umbo, fibrillose at length become smooth*, moist, the naked margin involute, ⅓ inch broad, mouse-coloured-fuliginous, flesh very thin, very tough, becoming whitish; stem stuffed, short, somewhat striate, slightly bulbous at the base, 2 lines thick, externally somewhat cartilaginous, internally wholly fibrous, whitish, then grey, as well as the gills, which are somewhat sinuato-decurrent, *crowded*, narrow. Inodorous.

In grassy places in woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

82. A. putidus Fr. *Hym. Eur. p.* 78. *B. & Br. No.* 1198.

Pileus slightly fleshy, hemispherical, *umbonate*, even, soft, hygrophanous, somewhat olive-grey, hoary when dry, here and there silky-white; stem hollow, fragile, somewhat compressed, wholly fibrous, soft, *pruinose*, 1½ inch long, 3 lines thick; gills adnexed, ventricose, *crowded*, cinerous, 2–3 lines broad. Odour of rancid meal.

In fir woods.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——

Jedburgh. A. Jerdon. Forres. M. Terry.
England. Europe.

5. CLITOBYBE Fr.

83. A. nebularis * Batsch. *Fr. Hym. Eur. p.* 79. *C. Hbk. No.* 81.

In woods. Sept.—Nov. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——

England. Europe. America.

84. A. clavipes * Pers. *Fr. Hym. Eur. p.* 79.

Pileus fleshy, soft, convexo-flattened, at length obconic, *naked*, fuscous-cinereous, becoming whitish especially round the margin, flesh white; stem stuffed, spongy-soft, elastic, somewhat fibrillose; gills decurrent, *descending*, *somewhat distant*, white. Odour mild, pleasant.

In woods. Sept.—Oct.

East.	——	——	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe.

85. A. inornatus Sow. *Fr. Hym. Eur. p.* 80. *C. Hbk. No.* 82.

In woods in grassy places.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Menmuir. Rev. M. L. Anderson.
England.

86. A. odorus * Bull. *Fr. Hym. Eur. p.* 85. *C. Hbk. No.* 84.

In woods. Sept.—Oct.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	Solway	Clyde	Argyle	Ross		

England. Europe. America. Siberia.

87. A. rivulosus Pers. *Fr. Hym. Eur. p.* 86. *B. & Br. No.* 1734.

Pileus convex then plane, depressed, somewhat-compact, flesh-coloured, rufescent, &c., *becoming very pale*, *smooth*, *at length rivulose with whitish drops*; stem stuffed, tough, elastic, somewhat fibrillose, flesh-coloured-white, as well as the gills, which are adnato-decurrent, *broad*, *somewhat crowded*. Smell pleasant; taste mild. It can be properly recognised only in wet weather.

On lawn. Oct.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Nairn. Rev. J. Keith.
England. Europe.

88. A. cerussatus * Fr. *Hym. Eur. p.* 86. *C. Hbk. No.* 85.

In mixed woods. Oct.

East.	Tweed	——	Tay	Dee	——	——
West.	——	Clyde	——	——		

England. Europe.

89. A. phyllophilus* Fr. *Hym. Eur. p.* 87. *C. Hbk. No.* 86.
In woods among leaves. Sept.—Oct.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

90. A. pithyophilus* Secr. *Fr. Hym. Eur. p.* 87. *C. Hbk. No.* 87.
In fir woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

91. A. candicans* Pers. *Fr. Hym. Eur. p.* 88. *C. Hbk. No.* 88.
In woods. Sept.—Oct.
East. Tweed —— Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America. Ceylon.

92. A. dealbatus* Sow. *Fr. Hym. Eur. p.* 88. *C. Hbk. No.* 89.
In woods and pastures. July—Sept.
East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

93. A. gallinaceus* Scop. *Fr. Hym. Eur. p.* 88. *C. Hbk. No.* 90.
In woods. Sept.
East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe.

94. A. elixus* Sow. *Fr. Hym. Eur. p.* 91. *C. Hbk. No.* 91.
In woods. Oct.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

95. A. fumosus* Pers. *Fr. Hym. Eur. p.* 91. *C. Hbk. No.* 92.
In woods. Oct.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

96. A. opacus * With. *Fr. Hym. Eur. p.* 93. *C. Hbk. No.* 93.
In woods. Sept.—Oct.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

97. A. maximus * Fl. Wett. (*A. giganteus* Leys and Auct.) *Fr. Hym. Eur. p.* 93. *B. & Br. No.* 987. *C. Hbk. No.* 94.
In grassy places, hedgerows, &c.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe.

98. A. infundibuliformis * Schaeff. *Fr. Hym. Eur. p.* 93. *C. Hbk. No.* 96.
In woods and grassy places. July—Nov. 1500 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. New Zealand.

Var. **membranaceus** * Fl. Dan. Glamis. J. S.

99. A. geotropus * Bull. *Fr. Hym. Eur. p.* 96. *C. Hbk. No.* 98.
In woods. Sept.—Oct.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Siberia.

100. A. inversus * Scop. *Fr. Hym. Eur. p.* 96. *C. Hbk. No.* 99.
In woods. Aug.—Nov.
East. Tweed Forth Tay —— —— ——
West. —— Clyde Argyle Ross
England. Europe. Tasmania.

101. A. flaccidus * Sow. *Fr. Hym. Eur. p.* 97. *C. Hbk. No.* 100.
In woods. Sept.—Nov. 1200 ft.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. Siberia.

102. A. cyathiformis * Bull. *Fr. Hym. Eur. p.* 100. *C. Hbk. No.* 101.
In woods. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America.

103. A. expallens* Pers. *Fr. Hym. Eur. p.* 100. *B. & Br.* 1511.

Pileus between fleshy and membranaceous, flatly infundibuliform, even, smooth, becoming fuscous, when dry whitish clay-colour, *margin soon expanded;* stem stuffed, then hollow, equal, silky-white at the apex; gills decurrent, slightly distant, white-cinereous.

In mixed wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
Europe.

104. A. brumalis* Fr. *Hym. Eur. p.* 103. *C. Hbk. No.* 102.

In woods. Oct.—Jan.

East. —— —— Tay —— Moray ——
West. —— Clyde —— ——

England. Europe.

105. A. metachrous* Fr. *Hym. Eur. p.* 103. *C. Hbk. No.* 103.

In grassy woods. Aug.—Oct.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

106. A. fragrans* Sow. *Fr. Hym. Eur. p.* 105. *C. Hbk. No.* 104.

In woods and open pasture. July—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe. Siberia.

107. A. ectypus Fr. *Hym. Eur. p.* 107. *C. Hbk. No.* 106.

In meadows.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Mossburnford. A. Jerdon.
England. Europe.

108. A. bellus Pers. *Fr. Hym. Eur. p.* 107. *C. Hbk. No.* 107.

In fir woods. Oct.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Darnaway. Rev. J. Keith.
England. Europe.

109. A. laccatus * Scop. *Fr. Hym. Eur. p.* 108. *C. Hbk. No.* 108.

In woods. Aug.—Nov. 1300 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. India. Ceylon.
Australia. Tasmania. Cuba.

110. A. Sadleri B. & Br. *No.* 1734. *Trans. Bot. Soc. Ed.* xiii. *p.* 216.

Cæspitose; strong-smelling; pileus plano-depressed or umbilicate, yellow, centre tawny, at first slightly silky, at length becoming smooth round the centre, 2–2½ inches across; stem thickened downwards, yellow, with tawny fibrils, becoming smooth, 3–4 inches high, about ⅛ inch thick, except at the base; gills lemon-coloured, thin, very much crowded, decurrent, quite entire at the margin.

Allied to *A. illudens* Schw., which is a far coarser species. The taste is intensely acrid, like that of *A. fasciculare*. Allied to *A. crocobaphus* B. & Br., from Ceylon. Probably of exotic origin.

On an oak tub in conservatory. Jan.—Oct.

East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Botanic Garden, 1877, 1878. J. Sadler.

6. COLLYBIA Fr.

111. A. radicatus * Rehl. *Fr. Hym. Eur. p.* 109. *C. Hbk. No.* 137.

On ground and stumps. Sept.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Australia.

112. A. fusipes * Bull. *Fr. Hym. Eur. p.* 111. *C. Hbk. No.* 140.

On old stumps. Nov.

East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe.

113. A. maculatus * A. & S. *Fr. Hym. Eur. p.* 112. *C. Hbk. No.* 141.

In woods, chiefly pine. July—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. India.

114. A. butyraceus* Bull. *Fr. Hym. Eur. p.* 113. *C. Hbk. No.* 142.

In woods. Aug.—Nov. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Siberia.

115. A. velutipes* Curt. *Fr. Hym. Eur. p.* 115. *C. Hbk. No.* 143.

On stumps and logs. Sept.—April.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. India.

116. A. stipitarius Fr. *Hym. Eur. p.* 116. *C. Hbk. No.* 144.

In waste places. Sept.—Nov.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Cuba.

117. A. confluens* Pers. *Fr. Hym. Eur. p.* 117. *C. Hbk. No.* 145.

In woods. June—Oct.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

118. A. ingratus* Schum. *Fr. Hym. Eur. p.* 118. *C. Hbk. No.* 146.

In woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

119. A. conigenus* Pers. *Fr. Hym. Eur. p.* 118. *C. Hbk. No.* 148.

On fir cones. Sept.—Dec.

East. —— Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

120. A. cirrhatus* Schum. *Fr. Hym. Eur. p.* 119. *C. Hbk. No.* 149.

Among leaves, and on blackened fungi. Aug.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Siberia.

121. A. tuberosus * Bull. *Fr. Hym. Eur. p.* 119. *C. Hbk. No.* 150.

On dead agarics. Sept.—Oct. 1400 ft.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe.

122. A. Stevensoni * B. & Br. *No.* 1497.

Pileus semiovate, obtuse, viscid, pallid yellow, here and there spotted by the viscous matter, ½ inch across and high; stem thin, fibrillose, pulverulent upwards, composed of fibres, internally and externally slightly rufous, rooting, 1½ inch high, scarce a line thick; gills broad, adnate with a decurrent tooth, distant, white.

Allied to *A. ventricosus*, but differing in its slender, almost solid stem, viscid, semiovate pileus, and very broad, adnate, somewhat ventricose, plane gills.

In old pasture. Aug.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis Castle Park, 1874. J. S.

123. A. xanthopus * Fr. *Hym. Eur. p.* 120. *C. Hbk. No.* 154.

On stumps. July.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Kirriemuir. Klotzsch, in Hook. Herb. Glamis. J. S.
England. Europe.

124. A. succineus * Fr. *Hym. Eur. p.* 120. *B. & Br. No.* 1339.

Pileus somewhat fleshy, convexo-expanded, *at length somewhat depressed*, easily split at the margin, 1 inch broad, reddish fuscous or brown, becoming very pale, very smooth as well as the stem, which is even, fistulose, not rooting, pallid-rufous, 1–2 inches long, 1–2 lines thick; gills obtusely *adnexed, broad, slightly thickened, serrulate*, rather distant, whitish.

In woods. Aug.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, 1874. J. S.
England. Europe.

125. A. nummularius * Lam. *Fr. Hym. Eur. p.* 120. *B. & Br. No.* 1743.

Pileus slightly fleshy, nearly plane, *depressed round the obsolete umbo*, even, pallid, 1½ inch and more; stem stuffed then hollow, smooth, pallid, thickened at the apex, 1½ inch long; gills free, some-

what distant, white. Colour variable becoming pale white, here and there variegated with yellow and reddish.

In mixed wood. July—Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill, 1874. J. S.
Europe.

126. A. esculentus * Wulf. *Fr.Hym.Eur.p.*121. *C.Hbk.No.*158.

In pastures. April—May.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

127. A. tenacellus * Pers. *Fr.Hym.Eur.p.*121. *C.Hbk.No.*157.

On fir cones. Jan.—Dec. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

128. A. acervatus Fr. *Hym. Eur. p.* 122. *C. Hbk. No.* 152.

In woods among fir.
East. —— —— —— —— —— ——
West. —— Clyde —— ——
Inveraray. Miss G. E. Johnstone.
England. Europe.

129. A. dryophilus * Bull. *Fr.Hym.Eur.p.*122. *C.Hbk.No.*155.

On leaves in mixed woods. June—Oct. 2000 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. India. Ceylon.

130. A. exculptus * Fr. *Hym. Eur. p.* 123. *C. Hbk. No.* 156.

In fir woods. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

131. A. clavus L. *Fr. Hym. Eur. p.* 123. *C. Hbk. No.* 159.

On dead sticks among leaves and moss. Autumn.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh. Greville.
England. Europe.

Without the plant it is impossible to determine whether *A. clavus* of the "Flora Edinensis" is to be identified with *A. acicula* Schaeff. *A. clavus* of the "English Flora," as Mr. Berkeley points out in his "Outlines," is *A. acicula;* but a comparison of references and descriptions leaves it somewhat uncertain whether Greville's plant is that which is figured in Bulliard. The balance of probability, however, seems against the latter supposition.

132. A. ocellatus* Fr. *Hym. Eur. p.* 123. *C. Hbk. No.* 160.

In woods among leaves. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Kinnordy. Klotzsch. Glamis. J. S.
England. Europe.

133. A. inolens* Fr. *Hym. Eur. p.* 126. *C. Hbk. No.* 161.

In woods, chiefly pine. Sept.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

134. A. plexipes Fr. *Hym. Eur. p.* 126. *C. Hbk. No.* 162.

In woods.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon. Melrose. C. E. Broome.
Europe.

135. A. atratus Fr. *Hym. Eur. p.* 127. *C. Hbk. No.* 165.

On burnt soil.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Caterthun. Rev. M. L. Anderson.
England. Europe.

136. A. protractus* Fr. *Hym. Eur. p.* 128. *C. Hbk. No.* 164.

On mossy ground beside old stumps. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

7. MYCENA Fr.

137. A. pelianthinus Fr. *Hym. Eur. p.* 130. *C. Hbk. No.* 166.

In woods.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Inveraray. Miss G. E. Johnstone.
England. Europe.

138. A. Iris* Berk. *Fr. Hym. Eur. p.* 131. *C. Hbk. No.* 174.

On fir sticks and roots. Sept.—Oct.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England.

139. A. marginellus* Pers. *Fr. Hym. Eur. p.* 131. *C. Hbk. No.* 168.

On fir stumps among moss. Aug.—Sept.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Europe.

140. A. aurantio-marginatus Fr. *Hym. Eur. p.* 131. *B. & Br. No.* 1516.

Pileus slightly fleshy, campanulato-expanded, somewhat umbonate, *even*, margin striate; stem even, smooth, ventricose, strigose, fistulose, very brittle; gills attenuato-adnexed, becoming greenish-pallid, fringed *at the edge with orange flocci*. Smell strong.

Has a peculiar aspect, which separates it from other species, looking more like a *Marasmius* than a *Mycena*.

In silver pine grove. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
Europe.

141. A. elegans * Pers. *Fr. Hym. Eur. p.* 131. *C. Hbk. No.* 169.
In pine woods. Aug.—Nov.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

142. A. rubro-marginatus * Fr. *Hym. Eur. p.* 132. *C. Hbk. No.* 170.
On pine stumps. July—Nov.
East. —— Forth Tay —— Moray ——
West. —— —— —— Ross
England. Europe.

Var. **fusco-purpureus** * Lasch. Glamis. J. S.

143. A. strobilinus Fr. *Hym. Eur. p.* 132. *C. Hbk. No.* 171.
On dead leaves, and cones of Scotch fir.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh. Greville.
England. Europe.

144. A. rosellus * Fr. *Hym. Eur. p.* 132. *C. Hbk. No.* 172.
In mixed woods. Sept.—Oct.
East. —— —— Tay Dee Moray
West. —— Clyde —— Ross
England. Europe.

145. A. purus * Pers. *Fr. Hym. Eur. p.* 133. *C. Hbk. No.* 173.
In mixed woods. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. India.

146. A. zephirus * Fr. *Hym. Eur. p.* 133. *B. & Br. No.* 1640.

Pileus slightly fleshy, campanulato-convex, expanded, obtuse, striate at the margin, 1 inch broad, pale flesh-colour or livid-rose; stem slightly striate, *squamulose*, lilac-rufescent, base woolly; gills attenuato-adnate, broadly linear, widely connected by veins, white.

On decayed fir wood. Dec.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1876. J. S.
Europe.

147. A. Adonis Bull. *Fr. Hym. Eur. p.* 134. *C. Hbk. No.* 175.

In woods. Oct.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

148. A. flavo-albus* Fr. *Hym. Eur. p.* 135. *C. Hbk. No.* 177.

In woods and meadows. July—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

149. A. lacteus* Pers. *Fr. Hym. Eur. p.* 135. *C. Hbk. No.* 178.

In woods, chiefly among pine leaves. July—Sept.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe. America.

150. A. proliferus* Sow. *Fr. Hym. Eur. p.* 137. *C. Hbk. No.* 179.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

151. A. excisus* Lasch. *Fr. Hym. Eur. p.* 137. *B. & Br. No.* 1517.

Pileus campanulato-convex, disc slightly fleshy, somewhat umbonate, *slightly wrinkled* (bay-brown, or somewhat fuscous); stem firm, tough, rooting, *even, becoming fuscous;* gills ventricose, thick, distant, connected by veins, hoary, *narrowed behind as if cut out*, nearly free.

The gills are hooked on the stem with a small tooth.

In mixed woods. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875. J. S.
Europe.

152. A. rugosus* Fr. *Hym. Eur. p.* 138. *C. Hbk. No.* 180.

On the ground and on stumps. July—Oct.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe. Siberia.

153. A. galericulatus * Scop. *Fr. Hym. Eur. p.* 138. *C. Hbk. No.* 181.

On stumps. July—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America. India. Tasmania.

154. A. polygrammus * Bull. *Fr. Hym. Eur. p.* 139. *C. Hbk. No.* 182.

On stumps and fallen branches. Sept.—Jan.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America. Siberia.

155. A. parabolicus * Fr. *Hym. Eur. p.* 139. *C. Hbk. No.* 183.

On fir trunks and posts.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Siberia.

156. A. tintinabulum * Fr. *Hym. Eur. p.*140. *B. & Br. No.*1746.

Pileus somewhat membranaceous, campanulato-convex, somewhat obtuse, become smooth, when moist *viscid*, unicolorous (colour very variable), bluish, yellowish-fuscous, whitish, commonly bay-brown; stem rigid, tough, even, smooth, pallid, strigosely rooted; gills *with a decurrent tooth, crowded*, plane, thin, whitish, becoming slightly flesh-coloured in drying.

In mixed wood. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill, 1876. J. S.
Europe.

157. A. atro-albus * Bolt. *Fr. Hym. Eur. p.* 140. *C. Hbk. No.* 184.

In mixed woods among moss. July—Nov.

East. —— Forth Tay Dee Moray ——
West. —— —— —— Ross
England. Europe.

158. A. dissiliens * Fr. *Hym. Eur. p.* 141. *C. Hbk. No.* 185.

On trunks. July—Nov. 1200 ft.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

159. A. atro-cyaneus * Batsch. *Fr. Hym. Eur. p.* 141. *B. & Br. No.* 1640.

Fragile, inodorous; pileus membranaceous, campanulato-convex, *covered with white powder which is easily rubbed off*, the obtuse umbo irregular in shape, 3–5 lines broad, of one colour, fuscous, becoming greyish-blue; stem straight, *filiform*, smooth, *dark blue*, slightly bulbous at the base, ½–2 inches long; gills attenuato-adnexed, united behind by a collar, lanceolate, distant, whitish.

In fir and mixed woods. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1875. J. S.
Europe. Tasmania.

160. A. alkalinus * Fr. *Hym. Eur. p.* 141. *C. Hbk. No.* 186.

On trunks and stumps. June—Nov.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde —— Ross

England. Europe. America.

161. A. ammoniacus * Fr. *Hym. Eur. p.* 142. *B. & Br. No.* 1214.

Strong-smelling; pileus membranaceous, conico-expanded, *umbonate, naked, discoid, opaque*, striate at the paler margin, variable in colour, normally fuscous, sometimes cinereous; stem rather firm, even, smooth, dry, *rooting*, thickly filiform, nearly 2 inches long, ½ line thick, whitish (not becoming yellow), as well as the adnate, linear, distinct gills.

On the ground.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S. Balnamoon. Rev. M. L. Anderson.
England. Europe.

162. A. metatus * Fr. *Hym. Eur. p.* 142. *B. & Br. No.* 1519.

Soft, strong-smelling; pileus somewhat membranaceous, obtuse, striate, hygrophanous, *even when dry, opaque*, pallid cinereous (yellowish, flesh-coloured, &c.), soon distinguished by being *whitish*, when dry under a lens sprinkled with somewhat silky atoms; stem firm, even, smooth, fibrillose at the base, and, like the pileus, soft rather than fragile, becoming flaccid; gills adnate, thin, distinct, linear, whitish. Odour obsoletely alkaline.

In mixed wood among moss. Oct.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Glamis, 1874. J. S. Forres. Rev. J. Keith. Rannoch. Dr. B. White.
Europe.

163. A. plicosus * Fr. *Hym. Eur. p.* 142. *B. & Br. No.* 1641.

Fragile; pileus membranaceous, campanulato-expanded, *plicato-sulcate*, opaque when dry, often cracked, the broad obtuse umbo slightly fleshy; stem polished, even, smooth, equal, rather short, and grey as well as the gills, which are adnate, *distant*, *thick*, connected by veins.

On the ground in wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Killin, 1876. J. S.
Europe.

164. A. peltatus Fr. *Hym. Eur. p.* 142.

Pileus slightly firm, convex then plane, obtuse, closely striate to the middle, *disc slightly fleshy, orbicular, even, plane*, ¾ inch broad, when moist black-fuscous, the central disc slightly depressed in drying, pale, and the raised striate portion becoming black; stem even, smooth, villous downwards, somewhat fragile, becoming livid; gills with a decurrent tooth, crowded, ventricose, grey, paler at the edge. Somewhat fasciculate; very distinct. Inodorous.

In woods among moss. Aug.—Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Altyre. Rev. J. Keith.
Europe.

165. A. aetites Fr. *Hym. Eur. p.* 143. *B. & Br. No.* 1411.

Fragile; pileus membranaceous, campanulato-convex, smooth, sulcate, hygrophanous, *the broad obtuse umbo prominent*, variable in colour, becoming fuscous, very pale, at length becoming black at the margin; stem unequal, somewhat compressed, smooth, shining, 2 inches long, whitish, becoming fuscous beneath; gills uncinate, somewhat arcuate, *thin*, connected by veins, linear, somewhat distant, at first cohering behind, whitish, somewhat grey at the sides. Odour becoming offensive or obsolete.

In woods.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.
Europe. Ceylon.

166. A. vitreus * Fr. *Hym. Eur. p.* 143. *C. Hbk. No.* 188.

In woods. Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

167. A. tenuis * Bolt. *Fr. Hym. Eur. p.* 143. *C. Hbk. No.* 189.

In shady moist woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

168. A. filopes * Bull. *Fr. Hym. Eur. p.* 144. *C. Hbk. No.* 191.

In woods. Sept.

East. Tweed Forth Tay —— —— ——
West. —— Clyde —— Ross

England. Europe. America. Ceylon.

169. A. amictus * Fr. *Hym. Eur. p.* 144. *B.& Br. No.* 1642.

Pileus membranaceous, conico-campanulate, striate to the middle, *dry, smooth*, greenish, bluish-grey, livid, sometimes pruinose; stem filiform, equal, *tough, villous-pulverulent*, the twisted root smooth; gills free, crowded, linear, grey, pale at the edge.

Among leaves. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1877. J. S.
Europe.

170. A. vitilis * Fr. *Hym. Eur. p.* 145. *C. Hbk. No.* 192.

In mixed woods among leaves. Sept.—Nov.

East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe.

171. A. collariatus * Fr. *Hym. Eur. p.* 146. *B. & Br. No.* 1520.

Pileus membranaceous, campanulato-convex, somewhat umbonate, striate, becoming very pale, smooth, ½ inch or more broad, in the typical form fuscous, but commonly whitish-grey, the disc only becoming fuscous; stem filiform, tough, smooth, shining, under a lens slightly striate, 1 inch long, nearly 1 line thick; gills *adnate with a collar*, thin, crowded, distinct, *whitish, or obsoletely flesh-coloured*, somewhat distant when the pileus is expanded.

In mixed woods. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
Europe.

172. A. speireus * Fr. *Hym. Eur. p.* 147. *C. Hbk. No.* 193.
In mixed woods. Aug.
East —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

173. A. acicula * Schaeff. *Fr. Hym. Eur. p.* 147. *C. Hbk.* 194.
In woods among leaves. July.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America. Ceylon. Cuba.

174. A. haematopus * Pers. *Fr. Hym. Eur. p.* 148. *C. Hbk. No.* 195.
In woods on stumps. Sept.
East. —— —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America.

175. A. cruentus * Fr. *Hym. Eur. p.* 148. *C. Hbk. No.* 196.
In pine woods. Sept.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe.

176. A. sanguinolentus * A. & S. *Fr. Hym. Eur. p.* 148. *C. Hbk. No.* 197.
In mixed woods among leaves. July—Oct.
East. —— Forth Tay —— —— ——
West. —— Clyde —— ——
England. Europe.

177. A. crocatus Schrad. *Fr. Hym. Eur. p.* 148. *C. Hbk. No.* 198.
In woods.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Fern. Rev. J. Fergusson.
England. Europe.

178. A. galopus * Pers. *Fr. Hym. Eur. p.* 149. *C. Hbk. No.* 200.
In woods among leaves. July—Sept.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America.

179. A. epipterygius* Scop. *Fr. Hym. Eur. p.* 149. *C. Hbk. No.* 201.

In woods and open ground. Aug.—Nov. 2000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Siberia. India.

180. A. clavicularis* Fr. *Hym. Eur. p.* 149. *B. & Br. No.* 1749.

Pileus membranaceous, convexo-expanded, striate, *dry, without a pellicle*, at first somewhat umbonate, *disc at length depressed*, whitish, yellowish, becoming fuscous; stem tough, smooth, viscid only in wet weather, whitish, fibrillose at the base; gills adnate, white, decurrent when the pileus is depressed.

In grassy ground in fir woods. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Warren Wood, 1876. J. S.
Europe.

181. A. pelliculosus* Fr. *Hym. Eur. p.* 149. *C. Hbk. No.* 202.

On the ground in mixed woods. Sept.—Oct.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— Ross
England. Europe.

182. A. vulgaris* Pers. *Fr. Hym. Eur. p.* 150. *C. Hbk. No.* 203.

In woods, chiefly pine, among moss. July—Nov.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia.

183. A. roridus* Fr. *Hym. Eur. p.* 150. *C. Hbk. No.* 205.

On dead sticks. Sept.

East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

184. A. stylobates* Pers. *Fr. Hym. Eur. p.* 150. *C. Hbk. No.* 206.

On sticks. Oct.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

185. A. tenerrimus* Berk. *Fr. Hym. Eur. p.* 151. *C. Hbk. No.* 207.
On fir cones, sticks, &c. Nov.
East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. Ceylon. Cuba.

186. A. pterigenus* Fr. *Hym. Eur. p.* 152. *C. Hbk. No.* 208.
On dead fern stems by rivulets. Sept.—Nov.
East. —— Forth Tay —— —— ——
West. —— —— —— Ross
England. Europe.

187. A. corticola* Schum. *Fr. Hym. Eur. p.* 152. *C. Hbk. No.* 209.
On trunks, ash, oak, &c. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America. Teneriffe. Ceylon. Bermuda.

188. A. hiemalis Osbeck. *Fr. Hym. Eur. p.* 153. *C. Hbk. No.* 210.
On oak trees. Sept.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Whiterow. Rev. J. Keith.
England. Europe.

189. A. capillaris* Schum. *Fr. Hym. Eur. p.* 153. *C. Hbk. No.* 212.
In woods on dead leaves. Sept.—Nov.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. Tasmania.

8.—OMPHALIA Fr.

190. A. umbilicatus* Schaeff. *Fr. Hym. Eur. p.* 155. *B. & Br. No.* 1644.
Somewhat caespitose; pileus somewhat membranaceous, umbilicate, reflexed, at length infundibuliform, *even*, smooth, hygrophanous, regular, when moist livid, or becoming fuscous, when dry whitish, or becoming yellow, the disc becoming fuscous; stem fistulose, *cylindrical, silky-striate with white fibrils at the apex;* gills very decurrent, crowded, whitish.
In woods.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
Europe. Arctic (Mount Prospect, Discovery Bay).

191. A. pyxidatus * Bull. *Fr. Hym. Eur. p.* 157. *C. Hbk. No.* 214.

In mixed woods. Aug.—Sept.

East. —— —— Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. Australia. New Zealand.

192. A. striaepileus * Fr. *Hym. Eur. p.* 157. *B. & Br. No.* 1646.

Pileus membranaceous, convex then *flattened*, umbilicate, smooth, *entirely striate, livid-fuscous*, becoming pale-whitish, hygrophanous, 1 inch broad; stem fistulose, smooth, tough, becoming fuscous, 2 inches long, a line thick; gills slightly decurrent, not much crowded, whitish.

In mixed wood. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1876. J. S.
Europe.

193. A. affricatus Fr. *Hym. Eur. p.* 158. *C. Hbk. No.* 216.

On Sphagnum. Aug.

East. —— —— Tay Dee —— ——
West. —— —— —— ——
Europe.

194. A. sphagnicola Berk. *Fr. Hym. Eur. p.* 158. *C. Hbk. No.* 217.

On Sphagnum. June.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England.

195. A. philonotis * Lasch. *Fr. Hym. Eur. p.* 158. *B. & Br. No.* 1412.

Fragile, cinereous-fuliginous to blackish; pileus membranaceous, *deeply infundibuliform*, hygrophanous, floccose when dry, margin erect; stem fistulose, smooth; *gills very decurrent*, somewhat distant, narrow, extended in a straight line to the margin, white-fuliginous.

On Sphagnum. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill, 1874. J. S.
Europe.

196. A. oniscus * Fr. *Hym. Eur. p.* 158. *C. Hbk. No.* 218.

In woods on swampy ground. Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.

England. Europe. Australia.

197. A. rusticus * Fr. *Hym. Eur. p.* 159. *B. & Br. No.* 1217.

Pileus membranaceous, *slightly convex*, umbilicate, striate, smooth, hygrophanous, when dry even, slightly silky, 3–5 lines broad, grey, then whitish, or becoming fuscous; stem somewhat stuffed, slender, smooth, *grey-fuscous*, 1 inch or less long, ½ line thick, sometimes equal and *fuscous*, sometimes thickened upwards and *grey;* gills decurrent, thick, rather distant, attenuated equally towards each end, *grey, edge arcuate.*

In grass avenue in wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

England. Europe. Siberia.

198. A. demissus * Fr. *Hym.Eur.p.*160. *A.rufulus,C.Hbk.No.*221.

In waste places. Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

199. A. muralis * Sow. *Fr. Hym. Eur. p.* 160. *C. Hbk. No.* 219.

On turf walls, &c. Feb.—Sept.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe. America.

200. A. umbelliferus * L. *Fr. Hym. Eur. p.* 160. *C. Hbk. No.* 220.

Pastures, boggy ground, &c. April—Dec. 4000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe. America. India. Ceylon. Cape. Australia. Tasmania. New Zealand. Arctic.

White-form, *A. chrysoleucus* Pers. Glamis. J. S.

Golden-yellow. Farragon. J. S.

201. A. stellatus * Fr. *Hym. Eur. p.* 162. *C. Hbk. No.* 222.

On sticks, &c. Sept.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe.

202. A. campanella Batsch. *Fr.Hym.Eur.p.*162. *C.Hbk.No.*223.

In fir woods. Aug.—Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Cuba.

Var. **badipus** Fr. Rothiemurchus. Rev. J. Keith.

203. A. pictus * Fr. *Hym. Eur. p.* 163. *B. & Br. No.* 1647.

Pileus membranaceous, campanulate, *hood-shaped*, umbilicate, smooth, striate, becoming fuscous, *disc somewhat yellow*, paler at the margin; stem stuffed, horny, bay-brown, smooth, extended at the base in a *radiating tawny membrane;* gills somewhat decurrent, very broad, distinct, distant, convex, pallid, much broader than long on account of the pileus never being flattened out.

In mixed wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Killin, 1876. J. S.
Europe.

204. A. griseus Fr. *Hym. Eur. p.* 164. *C. Hbk. No.* 225.

In pine wood. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J. Keith.
England. Europe.

205. A. fibula * Bull. *Fr. Hym. Eur. p.* 164. *C. Hbk. No.* 227.

In mossy ground. Aug.—Oct. 2500 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross

England. Europe. America. Australia. Cuba.

Var. **Swartzii** * Fr.

Pileus nearly plane, whitish, disc fuscous; stem whitish, violaceous at the apex.

—— Forth Tay Dee Moray ——

206. A. belliae Johnst. *Fr. Hym. Eur. p.* 165. *C. Hbk. No.* 229.
On dead stems of reed.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Berwickshire. Johnstone, Fl. Berwick.

207. A. gracillimus Weinm. *Fr.Hym.Eur.p.*165. *C.Hbk.No.*228.
Among *Vaccinium.* Aug. 2400 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glen Tilt. Dr. B. White.
England. Europe.

208. A. integrellus Pers. *Fr. Hym. Eur. p.* 165. *C. Hbk. No.* 230.
On decayed sticks, on willow, and among moss.
Oct.—Nov.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Tasmania.

9.—PLEUROTUS Fr.

209. A. corticatus Fr. *Hym. Eur. p.* 166. *C. Hbk. No.* 109.
On decayed ash. Sept.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Manse of Dyke. Rev. J. Keith.
England. Europe. Siberia. Australia.

210. A. dryinus Pers. *Fr. Hym. Eur. p.* 167. *C. Hbk. No.* 110.
On ash. Sept.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Fungus Show, 1878.
England. Europe. America. Ceylon.

211. A. ulmarius * Bull. *Fr. Hym. Eur. p.* 167. *C. Hbk. No.* 112.
On trunks, especially elm.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

212. A. mutilus Fr. *Hym. Eur. p.* 173. *B. & Br. No.* 1647.

White; pileus *slightly fleshy*, changeable in form, spathulate or kidney-shaped, *when dry silky*, becoming smooth; stem erect, excentric, and somewhat lateral, short, cylindrical, villous at the base; gills decurrent, somewhat crowded, *narrow*, rather thick, simple.

On grassy hillside. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glen Tilt. Dr. B. White.
England. Europe.

213. A. ostreatus Jacq. *Fr. Hym. Eur. p.* 173. *C. Hbk. No.* 118.

On trees, especially laburnum.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

214. A. euosmus * Berk. *Fr. Hym. Eur. p.* 174. *C. Hbk. No.* 271.

On elm stump. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dunkeld. J. S.
England.

215. A. salignus A. & S. *Fr. Hym. Eur. p.* 174. *C. Hbk. No.* 119.

On willow and alder. July—Oct.

East. —— —— —— —— Moray ——
West. —— —— Argyle ——

England. Europe. America.

216. A. pulmonarius Fr. *Hym. Eur. p.* 176. *B. & Br. No.* 1522.

Horizontal; pileus fleshy, soft, *slightly convex*, *obovate* and kidney-shaped, smooth; *stem* lateral, *cylindrical*, very short, villous; gills plano-decurrent, simple, becoming whitish-livid.

On trunks. Sept.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Aberdeen Fungus Show, 1874.
Europe.

217. A. serotinus Schrad. *Fr. Hym. Eur. p.* 176. *C. Hbk. No.* 121.

On ash and birch trunks. Nov.—Dec.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

218. A. mitis* Pers. *Fr. Hym. Eur. p.* 177. *C. Hbk. No.* 122.

On dead larch. Jan.—Dec.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe.

219. A. reniformis* Fr. *Hym. Eur. p.* 177. *B. & Br. No.* 1648.

Small, 3–5 lines broad; pileus slightly fleshy (flesh very thin, *somewhat gelatinous*, diaphanous), *horizontal*, *kidney-shaped*, plane (margin regular, entire, extended), *cinereous*, emarginate behind, with a very short villous rudiment of a stem; gills *springing* and diverging *from a stem-like tubercle*, thin, linear, grey.

On branches of silver fir.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1877. J. S. Perth. Dr. B. White.
Europe.

220. A. tremulus Schaeff. *Fr. Hym. Eur. p.* 177. *C. Hbk. No.* 123.

On the ground and on moss. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Highlands. Hooker. Aviemore. Rev. J. Keith.
England. Europe. America.

221. A. acerosus* Fr. *Hym. Eur. p.* 178. *C. Hbk. No.* 124.

On decayed wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

222. A. porrigens* Pers. *Fr. Hym. Eur. p.* 178. *C. Hbk. No.* 125.

In woods on stumps, chiefly fir. Sept.—Oct.

East. —— —— Tay Dee —— ——
West. —— Clyde —— Ross
England. Europe.

223. A. septicus* Fr. *Hym. Eur. p.* 179. *C. Hbk. No.* 126.

On decayed wood, fungi, &c. June—Oct.

East. Tweed —— Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe.

224. A. atro-caeruleus Fr. *Hym. Eur. p.* 179. *C. Hbk. No.* 128.
On decayed birch. Nov.—Dec.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Dunphail. Rev. J. Keith.
England. Europe.

225. A. algidus Fr. *Hym. Eur. p.* 180. *C. Hbk. No.* 129.
On trunks.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Linlithgow. Cooke's Handbook.
England. Europe.

226. A. fluxilis * Fr. *Hym. Eur. p.* 180. *B. & Br. No.* 1756.
Sessile; pileus slightly fleshy, kidney-shaped, *gelatinous-viscous upwards*, somewhat umber; gills linear, diverging from a lateral point, distant, whitish, few of them entire.
On wood.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1877. J. S.
Europe.

227. A. applicatus* Batsch. *Fr. Hym. Eur. p.* 180. *C. Hbk. No.* 133.
On dead ash. May—Oct.
East. —— —— Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America. Juan Fernandez.
Siberia. Australia. Tasmania. Cuba.

228. A. striatulus * Fr. *Hym. Eur. p.* 181. *C. Hbk. No.* 134.
On fir, hazel, elm. Oct.—Nov.
East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe. America.

229. A. hypnophilus Berk. *Fr. Hym. Eur. p.* 181. *C. Hbk. No.* 135.
On the larger mosses, and on fallen leaves.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe.

SERIES. II.—HYPORHODII. *Spores Salmon-Colour.*

10.—VOLVARIA FR.

230. A. Loveianus* Berk. *Fr. Hym. Eur. p.* 182. *C. Hbk. No.* 233.
On *Ag. nebularis.* Nov.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill. J. S.
England.

231. A. speciosus Fr. *Hym. Eur. p.* 183. *C. Hbk. No.* 236.
Dunghills, roadsides, &c. Sept.—Oct.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Loch-an-Eilan. Rothiemurchus. Rev. J. Keith.
England. Europe. America.

232. A. gloiocephalus Fr. *Hym. Eur. p.* 183. *C. Hbk. No.* 237.
On the ground. June.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England. Europe.

11.—ANNULARIA SCHULZ.

12.—PLUTEUS FR.

233. A. cervinus* Schaeff. *Fr. Hym. Eur. p.* 185. *C. Hbk. No.* 240.
On trunks and old stumps. May—Sept.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. Ceylon. Tasmania.

Var. **eximius*** Saund. & Sm. *Fr. Hym. Eur. p.* 186.

Pileus even, covered with a viscid separable pellicle, *rufescent-umber;* stem fibrillose, at length blackish.

On sawdust. Glamis. J. S.

Var. **petasatus** Fr. *Hym. Eur. p.* 186. *C. Hbk. No.* 243.

On sawdust. Sanquhar. Dallas. Rev. J. Keith.

234. A. umbrosus* Pers. *Fr. Hym. Eur. p.* 186. *C. Hbk. No.* 241.

On dead wood. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Loch-an-Eilan. Rev. J. Keith.
England. Europe.

235. A. nanus* Pers. *Fr. Hym. Eur. p.* 187. *C. Hbk. No.* 242.

On fallen sticks and sawdust. Sept.—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Ceylon.

236. A. chrysophaeus* Schaeff. *Fr. Hym. Eur. p.* 188. *C. Hbk. No.* 245.

On stumps. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

237. A. phlebophorus Dittm. *Fr. Hym. Eur. p.* 188. *C. Hbk. No.* 246.

On rotten wood, sawdust, &c.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. Ceylon.

13.—ENTOLOMA Fr.

238. A. sinuatus* Fr. *Hym. Eur. p.* 189. *C. Hbk. No.* 247.

In mixed woods, chiefly among fir. July—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— Ross

England. Europe. America.

239. A. prunuloides Fr. *Hym. Eur. p.* 189. *C. Hbk. No.* 248.

In woods.

East. Tweed —— —— —— Moray ——
West. —— Clyde —— ——

Europe.

240. **A. placenta*** Batsch. *Fr. Hym. Eur. p.* 190. *C. Hbk. No.* 249.
In hedgerow. April.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

241. **A. Bloxami** Berk. *Fr. Hym. Eur. p.* 191. *C. Hbk. No.* 252.
In grassy places.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England.

242. **A. jubatus*** Fr. *Hym. Eur. p.* 193. *C. Hbk. No.* 256.
In pastures. Aug.—Oct.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

243. **A. resutus*** Fr. *Hym. Eur. p.* 193. *B. & Br. No.* 1414.
Pileus somewhat fleshy, convex, obtuse, *adpressedly squamose*, or longitudinally fibrillose, becoming fuscous, centre darker, 1 inch broad; *stem somewhat stuffed*, equal, soft, *smooth*, wholly fibrous, but externally polished, 1½–2 inches long, a line and more thick, grey, as well as the gills, which are slightly adnexed, ventricose, thickish. Inodorous.
In pastures. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Castle Park, 1874. J. S.
Europe.

244. **A. griseo-cyaneus*** Fr. *Hym. Eur. p.* 193. *C. Hbk. No.* 257.
In pastures and open woods. Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Ceylon.

245. **A. sericellus*** Fr. *Hym. Eur. p.* 194. *C. Hbk. No.* 258.
Woods and grassy banks. Aug.—Oct.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

246. A. clypeatus * L. *Fr. Hym. Eur. p.* 194. *C. Hbk. No.* 259.
Woods and waste places. May—July.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

247. A. rhodopolius * Fr. *Hym. Eur. p.* 195. *C. Hbk. No.* 260.
In mixed woods. Sept.—Oct.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Ceylon.

248. A. majalis * Fr. *Hym. Eur. p.* 196. *C. Hbk. No.* 261.
In meadows and open woods. April.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Den of Dun. J. S.
England. Europe.

249. A. sericeus * Bull. *Fr. Hym. Eur. p.* 196. *C. Hbk. No.* 263.
In meadows and open woods. May—Sept. 1000 ft.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Ceylon.

250. A. nidorosus * Fr. *Hym. Eur. p.* 196. *C. Hbk. No.* 264.
Lawns and open woods. Aug.—Sept.
East. —— —— Tay Dee —— ——
West. —— —— —— Ross
England. Europe.

14.—CLITOPILUS Fr.

251. A. prunulus * Fr. *Hym. Eur. p.* 197. *C. Hbk. No.* 265.
In woods and open ground. July—Oct.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America.

252. A. orcella * Bull. *Fr. Hym. Eur. p.* 197. *C. Hbk. No.* 265.
In open ground. July—Oct.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

253. A. mundulus Lasch. *Fr. Hym. Eur. p.* 198. *C. Hbk. No.* 267.
In woods.
Scotland. Klotzsch.
England. Europe.

15.—LEPTONIA Fr.

254. A. lappula Fr. *Hym. Eur. p.* 202. *B. & Br. No.* 1225.
Pileus slightly fleshy, convex then plane, *umbilicate, grey*, without striae, *dotted and roughish* with short erect fibrils, which become crowded in the umbilicus, and render it darker; stem fistulose, slightly striate, lilac-fuscous, sometimes dark purple, naked and *black-dotted* at the apex; gills adnate-retreating, decurrent with a small tooth, broad, crowded, whitish.
Among beech leaves.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.
Europe.

255. A. lampropus * Fr. *Hym. Eur. p.* 202. *C. Hbk. No.* 275.
In pastures. July—Nov.

East.	——	Forth	Tay	——	Moray	——
West.	——	Clyde	——	Ross		

England. Europe.

256. A. aethiops * Scop. *Fr. Hym. Eur. p.* 202. *B. & Br. No.* 1649.
Pileus slightly fleshy, plano-depressed, without striae, shining, *black then fuliginous, smooth*, but streaked with innate fibrils; stem somewhat stuffed, thin, smooth, fuscous-blackish, *black-dotted upwards*; gills adnate, whitish, of the same colour at the edge.
In grassy places in woods. Sept. 1600 ft.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Killin, 1876. J. S. Glen Tilt. Dr. B. White.
Europe.

257. A. solstitialis Fr. *Hym. Eur. p.* 202. *B. & Br. No.* 1226.
Pileus slightly fleshy, at length depressed, papillate in the centre, slightly wrinkled, obsoletely *clothed with innate fibrils*, becoming fuscous; stem somewhat fistulose, smooth, not dotted, *smoke-colour; gills emarginate*, broad, white, of the same colour at the edge.
Among stones and rough ground. Aug.

East.	——	——	Tay	Dee	——	——
West.	——	——	——	——		

Kinord. Rev. M. J. Berkeley. Glen Tilt. Dr. B. White.
Europe.

258. A. serratulus * Pers. *Fr. Hym. Eur. p.* 203. *C. Hbk. No.* 276.
In mixed woods. July—Aug.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. Ceylon.

259. A. euchrous * Pers. *Fr. Hym. Eur. p.* 203. *C. Hbk. No.* 277.
On alder stumps. Sept.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

260. A. chalyboeus * Pers. *Fr. Hym. Eur. p.* 203. *C. Hbk. No.* 278.
In pastures. Aug.—Sept. 1000 ft.
East. —— Forth Tay Dee —— ——
West. —— Clyde —— Ross
England. Europe.

261. A. incanus Fr. *Hym. Eur. p.* 204. *C. Hbk. No.* 279.
In pastures. July.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. Ceylon.

262. A. asprellus Fr. *Hym. Eur. p.* 205. *C. Hbk. No.* 280.
In grassy glades.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

16.—NOLANEA Fr.

263. A. pascuus * Pers. *Fr. Hym. Eur. p.* 206. *C. Hbk. No.* 281.
In pastures. July—Nov. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America. Siberia. Tasmania.

264. A. rufo-carneus * Berk. *Fr. Hym. Eur. p.* 208. *C. Hbk. No.* 282.
In grassy heath. Aug.—Sept.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England.

17.—ECCILIA Fr.

265. **A. carneo-griseus** B. & Br. *Fr. Hym. Eur. p.* 212. *C. Hbk. No.* 286.

Among fir leaves. Aug.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Aboyne. Rev. M. J. Berkeley.

266. **A. nigrella** Pers. *Fr. Hym. Eur. p.* 212. *B. & Br. No.* 1651. *Grevillea*, vi. *p.* 100.

Small, somewhat tufted; pileus smooth, umbilicate, growing blackish; gills flesh-coloured, then somewhat cinereous; stem short, glaucous.

Fries identifies this with *A. atrides* Lasch. Berkeley says, "This appears to be quite distinct from *A. atrides*; the stem is not nigro-punctate above, nor are the gills nigro-denticulate."

In pastures.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
Europe.

18.—CLAUDOPUS Fr.

267. **A. variabilis** * Pers. *Fr. Hym. Eur. p.* 213. *C. Hbk. No.* 272.

On stumps, &c. Sept.—Nov.

East Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Siberia. Teneriffe.

SERIES III.—DERMINI. *Spores Brown.*

19.—PHOLIOTA Fr.

268. **A. Vahlii** * Schum. *B. & Br. No.* 1652. *Grevillea*, vi. *p.* 100.

Solitary, ferruginous-orange; pileus hemispherical, even; stem long, thick, even, rather bulbous at the base; ring large, plicate, erect, punctate with white; gills narrower than the flesh of the pileus, rounded at the base. *Fl. Dan. f.* 1496.

Fries regards this as a variety of *A. aureus*, but our Scottish specimens differ, and accord exactly with the "Flora Danica."

In grassy open places in woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Inver, Dunkeld, 1875. C. M'Intosh. Moncreiffe. Sir T. Moncreiffe, Bart.
Europe.

269. A. caperatus * Pers. *Fr. Hym. Eur. p.* 215. *C. Hbk. No.* 486.

In woods. Sept.—Oct.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——

England. Europe.

270. A. terrigenus * Fr. *Hym. Eur. p.* 215. *B. & Br. No.* 1652.

Pileus fleshy, compact, lenticular then expanded, obtuse, adpressedly *fibrilloso-silky*, dirty yellow, 1½–3 inches broad; stem fibrous, stuffed then hollow, equal, fibrillose, and beautifully *squarrose with ferruginous, wart-shaped scales*, 2 inches long, 3–6 lines thick, veil partly annular on the stem, partly hanging from the margin of the pileus; gills adnate, pallid yellow, becoming olive-ferruginous.

On old stumps. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Kenmore, 1877. J. S.
Europe.

271. A. erebius * Fr. *Hym. Eur. p.* 216. *A. Leveillianus* D. & M. *C. Hbk. No.* 307.

In open woods, chiefly under beech. Aug.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. New Zealand.

272. A. togularis Bull. *Fr. Hym. Eur. p.* 216. *A. mycenoides* Fr. *C. Hbk. No.* 306.

In grassy places. May.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

273. A. durus Bolt. *Fr. Hym. Eur. p.* 216. *C. Hbk. No.* 289.
In garden ground. July—Sept.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

274. A. præcox * Pers. *Fr. Hym. Eur. p.* 217. *C. Hbk. No.* 290.
In pastures. April—July.
East. Tweed —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

275. A. radicosus Bull. *Fr. Hym. Eur. p.* 218. *C. Hbk. No.* 291.
In woods. Sept.—Oct.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Fungus Show, 1878.
England. Europe.

276. A. pudicus * Bull. *Fr. Hym. Eur. p.* 218. *C. Hbk. No.* 292.
In open woods. June.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. Australia.

277. A. squarrosus * Müll. *Fr. Hym. Eur. p.* 221. *C. Hbk. No.* 297.
About roots of trees, chiefly ash. June—Dec.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

278. A. spectabilis * Fr. *Hym. Eur. p.* 221. *C. Hbk. No.* 300.
In woods, chiefly pine. Aug.—Nov.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

279. A. flammans * Fr. *Hym. Eur. p.* 222. *C. Hbk. No.* 301.
In woods, chiefly Scotch fir. July—Oct.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe.

280. A. mutabilis* Schaeff. *Fr.Hym.Eur.p.*225. *C.Hbk.No.*303.

On stumps. April—Oct.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Siberia. Tasmania.

281. A. marginatus* Batsch. *Fr. Hym. Eur. p.* 225. *C. Hbk. No.* 304.

In woods, chiefly pine. Sept.—Dec.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

20.—INOCYBE Fr.

282. A. relicinus Fr. *Hym. Eur. p.* 227. *C. Hbk. No.* 316.

In fir woods among Sphagnum.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Kinnordy. Klotzsch.
England. Europe.

283. A. calamistratus* Fr. *Hym. Eur.p.*227. *B.&Br.No.*1234.

Pileus fleshy, thin, campanulate, obtuse, umber, flesh-reddish; stem solid, rigid, *sky-blue at the base*, and, as well as the pileus, everywhere squarrose with *rigid recurved scales*; gills adnexed, whitish, then ferruginous, edge thick, notably whitish. Strong-smelling.

In moist ditch among leaves. Aug.—Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill, 1874, 1878. J. S.
England. Europe.

284. A. languinosus* Bull. *Fr.Hym.Eur.p.*227. *C.Hbk.No.*317.

In mixed wood. Aug.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe.

285. A. dulcamarus* A. & S. *Fr. Hym. Eur. p.* 228. *B. & Br. No.* 1653. *Pers. Ic. t.* 15, *fig.* 2.

Pileus slightly fleshy, convex, umbonate, umber, clothed with adpressed fibres, the centre breaking up into areolate patches, about $\frac{1}{2}$–$\frac{1}{2}$ inch across; stem somewhat hollow, of the same colour as the

pileus, scaly below, tomentose above, 1 inch or more long, 1 line thick; gills clay-coloured, olivaceous, ventricose, margin paler, waved, adnate, with a strong decurrent tooth; spores even; flesh white; taste at first pleasant.

On the ground in mixed wood. Aug.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Pass of Killiecrankie, 1877. J. S.
Europe.

286. A. pyriodorus Pers. *Fr. Hym. Eur. p.* 228. *C. Hbk. No.* 319.

In woods and gardens.

East.	——	——	——	Dee	——	——
West.	——	——	——	——		

Scotland. Klotzsch. Denmore, Aberdeen. Professor Dickie.
England. Europe. America.

287. A. scaber* Müll. *Fr. Hym. Eur. p.* 228. *C. Hbk. No.* 320.

In mixed woods. Sept.—Oct.

East.	Tweed	Forth	Tay	Dee	——	——
West.	——	Clyde	——	——		

England. Europe.

288. A. maritimus* Fr. *Hym. Eur. p.* 229. *B. & Br. No.* 1525.

Pileus convexo-expanded, obtuse, flocculoso-fibrillose, somewhat scaly, *hygrophanous*, umber, becoming hoary, flesh dingy; stem solid, flocculoso-fibrillose, smoke-coloured; gills adnato-ventricose, broad, somewhat distant, grey becoming ferruginous. Scarcely odorous.

On sandy ground in woods. Sept.—Oct.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, 1874. J. S. Sands of Barry. Rev. M. L. Anderson. Rannoch. Dr. B. White.
Europe. America.

289. A. lacerus* Fr. *Hym. Eur. p.* 229. *C. Hbk. No.* 321.

In woods. July—Sept.

East.	——	——	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe.

290. A. Bongardii Weinm. *Fr.Hym.Eur.p.*229. *B.&Br. No.*1417.

Pileus slightly fleshy, campanulate, obtuse, disc scaly, torn-fibrillose towards the margin, when moist becoming fuscous, when dry becoming pale, not cracked, flesh reddish, 1–1½ inches broad; stem solid, rigid, *without a veil*, pallid-rufescent, *reddish-silky downwards, white-pulverulent at the apex*, 2–3 inches long, 2 lines thick; gills adnato-ventricose, broad, not crowded, pale reddish then cinnamon. Odour sweet, "Bergamotte" Weinm.

On sandy ground. May—Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Culbin sand-hills, Findhorn. G. Norman.
Europe.

291. A. deglubens* Fr. *Hym. Eur. p.* 230. *C. Hbk. No.* 325.

In moist woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— Ross

England. Europe.

292. A. obscurus Pers. *Fr. Hym. Eur. p.* 231. *C. Hbk. No.* 322.

On muddy ground. July.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.
England. Europe.

293. A. fibrosus Sow. *Fr. Hym. Eur. p.* 231. *C. Hbk. No.* 326.

In fir woods. July—Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Divie. Rev. J. Keith.
England. Europe.

294. A. phæocephalus* Bull. *Fr. Hym. Eur. p.* 231. *B. & Br. No.* 1233. 1758.

Pileus fleshy, conico-campanulate, umbonate, repand, squamulose, *bay-brown, fuliginous*, 2–4 inches broad; stem solid, somewhat bulbous, of the same colour as the pileus above, white below, villous, 3–5 inches long, 4–7 lines thick; gills free, arcuate, yellow, then earth-colour; spores bright ferruginous-red.

My specimens have fully confirmed Mr. Berkeley's opinion that this is a true *Inocybe*.

In mixed wood. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. J. S.
England. Europe.

295. A. fastigiatus* Schaeff. *Fr.Hym.Eur.p.*231.*C.Hbk.No.*327.
In woods. Aug.—Sept.
East. —— —— Tay Dee —— ——
West. —— Clyde —— ——
England. Europe.

296. A. hiulcus* Fr. *Hym. Eur. p.* 232. *C. Hbk. No.* 333.
In woods. Aug.—Sept.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

297. A. rimosus* Bull. *Fr. Hym. Eur. p.* 232. *C. Hbk. No.* 330.
In woods and open ground. July—Oct. 1800 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Siberia.

298. A. euthelus B. & Br. *Fr.Hym. Eur. p.* 232. *C. Hbk. No.* 329.
Among fir leaves. Aug.—Sept.
East. —— —— —— Dee Moray ——
West. —— —— —— ——
Aboyne. Rev. M. J. Berkeley. Forres. Rev. J. Keith.

299. A. descissus Fr. *Hym. Eur. p.* 233. Var. *auricomus, C. Hbk. No.* 331.
In pine wood. Nov.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
Europe.

300. A. Trinii* Weinm. *Fr. Hym. Eur. p.* 233. *B. & Br. No.* 1656.

Pileus slightly fleshy, hemispherical, obtuse, longitudinally rufescent-fibrillose, scarcely either cracked or scaly, whitish rufescent, when dry tawny, ½ inch broad; stem stuffed, equal, slender, *loosely rufous-fibrillose*, white-mealy; gills rounded, ventricose, cinnamon-coloured, with white flocci at the edge; spores strongly granulated. Remarkable; *clove-scented.*

In mixed wood. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Ballinluig, 1877. J. S.
Europe.

301. A. sambucinus Fr. *Hym. Eur. p.* 234.

Solitary, *white;* pileus fleshy, firm, convexo-expanded, obtuse, fibrillose-silky, even (smoothish), compact, slimy, sometimes becoming yellow; stem solid, *obese*, often decumbent, *smooth, striate*, white; gills somewhat adnexed, crowded, ventricose, unicolorous, whitish.

In pine wood. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
Europe.

302. A. lucifugus* Fr. *Hym. Eur. p.* 234. *C. Hbk. No.* 334.

In woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

303. A. sindonius* Fr. *Hym. Eur. p.* 234. *C. Hbk. No.* 335.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

304. A. geophyllus* Sow. *Fr. Hym. Eur. p.* 235. *C. Hbk. No.* 336.

In woods among leaves. July—Oct. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe. America. Siberia.

Var. **lateritius*** B. & Br. *No.* 1234.

Retaining its brick-red colour when dry.

Jedburgh. A. Jerdon. Glamis. J. S.

305. A. trechisporus* Berk. *Fr. Hym. Eur. p.* 236. *C. Hbk. No.* 332.

In mixed woods. Sept.—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

306. **A. Whitei** B. & Br. *No.* 1527.

Pileus convex, at first hemispherical, tawny, margin white, slightly viscid, with a white fibrillose veil, at length expanded, entirely tawny; stem white, then becoming tawny, becoming smooth, solid; gills at first white, adnexed.

A very curious and beautiful little species, allied to *A. vatricosus*. Stature that of *A. geophyllus*.

In wood. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch, 1875. Dr. B. White.

A. Hookeri Klotzsch. *Fr. Hym. Eur. p.* 318. *C. Hbk. No.* 324.

A doubtful species. Glasgow. J. D. Hooker.

21.—HEBELOMA Fr.

307. **A. fastibilis*** Fr. *Hym. Eur. p.* 237. *C. Hbk. No.* 313.

In mixed woods. Sept.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. Siberia.

308. **A. testaceus*** Batsch. *Fr. Hym. Eur. p.* 238. *C. Hbk. No.* 314.

In woods and meadows. Sept.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. Siberia.

309. **A. claviceps*** Fr. *Hym. Eur. p.* 238. *A. clavus* Batsch. *B. & Br. No.* 1236.

Pileus *convex* then expanded, the *gibbous disc* fleshy, even, *naked*, *pallid*; stem stuffed, equal, everywhere covered with white mealiness, fuscous downwards; gills emarginate, crowded, dry, pallid.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. Killin. J. S.
England. Europe.

310. **A. punctatus** Fr. *Hym. Eur. p.* 239. *C. Hbk. No.* 308.

In pine woods. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.
England. Europe.

311. A. versipellis Fr. *Hym. Eur. p.* 239. *C. Hbk. No.* 309.

Among fir leaves. Aug.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England. Europe.

312. A. mesophæus Pers. *Fr. Hym. Eur. p.* 240. *C. Hbk. No.* 310.

In pine woods.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England. Europe.

313. A. crustiliniformis* Bull. *Fr. Hym. Eur. p.* 241. *C. Hbk. No.* 312.

In mixed woods. Sept.—Oct.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

314. A. elatus Batsch. *Fr. Hym. Eur. p.* 241. *B. & Br. No.* 1238.

Pileus fleshy, orbicular, convexo-plane, obtuse, even, smooth, somewhat viscous, tan-colour, thin at the margin, 3 inches broad; stem stuffed, elongated, *cylindrical, twisted, adpressedly fibrillose,* woven with twisted fibres, apex mealy becoming pale, 4 inches long, 4 lines thick; gills rounded, crowded, *dry,* pale ferruginous, not spotted, 3 lines broad. Strong odour of radishes; bitter.

In pine wood. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
England. Europe.

315. A. longicaudus Pers. *Fr. Hym. Eur. p.* 241. *C. Hbk. No.* 315.

In woods. Sept.—Oct.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Darnaway, Sanquhar, &c. Rev. J. Keith.
England. Europe.

316. A. capniocephalus* Bull. *Fr. Hym. Eur. p.* 242. *B. & Br. No.* 1763.

Pileus fleshy, convexo-plane, obtuse, even, smooth, pinkish-yellow, with a darker disc, seemingly hygrophanous, margin at length becoming black, 2–3 inches broad, flesh whitish, thin towards the sides;

stem stuffed, *attenuated downwards, striate with rufescent fibrils,* becoming pale; gills emarginate, broad, scarcely crowded, ferruginous.

In mixed wood. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1876. J. S.
England. Europe.

22.—FLAMMULA Fr.

317. A. lentus* Pers. *Fr. Hym. Eur. p.* 246. *C. Hbk. No.* 341.

In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

318. A. lupinus* Fr. *Hym. Eur. p.* 246. *B. & Br. No.* 1528.

Pileus fleshy, flattened or depressed, *even,* viscous, with an easily separable pellicle, 2–4 inches broad, flesh soft, white; stem stuffed, *short, firm, unequal, ferruginous-tinted with adpressed fibrils,* white at the apex, thickened sometimes upwards, sometimes downwards, ½ inch thick, of the same colour as the pileus; gills adnato-decurrent, somewhat crowded, broad, pallid clay-colour.

In pastures. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Castle Park, 1874. J. S.
Europe.

319. A. mixtus* Fr. *Hym. Eur. p.* 246. *B. & Br. No.* 1239.

Pileus fleshy, convexo-plane, obtuse, viscous, *the darker disc slightly wrinkled,* like a smooth sugared cake, paler at the margin, 1–2 inches broad, flesh slightly firm, watery; stem hollow, curved, somewhat flexuous, slightly thickened at the base, pallid, *with fuscous fibrils and rufous scales downwards,* 1–3 inches long, 3–4 lines thick; gills somewhat decurrent, crowded, whitish clay-colour. *Inodorous.*

In mixed wood. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1875. J. S.
England. Europe.

320. A. spumosus Fr. *Hym. Eur. p.* 247. *C. Hbk. No.* 343.

In fir woods and on sawdust. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Grantown. Rev. J. Keith.
England. Europe. America.

321. A. carbonarius* Fr. *Hym. Eur. p.* 247. *C. Hbk. No.* 344.

On charcoal and burnt earth. Sept.—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

322. A. astragalinus Fr. *Hym. Eur. p.* 248.

Pileus fleshy, convexo-flattened, discoid, *at first superficially-silky round the margin*, somewhat moist, saffron-coloured-stained with blood-red, then pale at the margin, *flesh of the same colour* becoming black when bruised; stem somewhat hollow, flexuous, fibrilloso-scaly, elongated, attenuated at the base, nearly of one colour, pallid; gills adnate, crowded, pallid yellow then becoming ferruginous, of the same colour as the pileus at the base, when young the obtuse edge flocculose; spores dirty ferruginous, sparse. Small, very beautiful.

On pine stumps. Aug.—Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.
Europe.

323. A. alnicola* Fr. *Hym. Eur. p.* 248. *B. & Br. No.* 1242.

Pileus fleshy, convexo-plane, moist, even, at first somewhat fibrilloso-scaly, or smooth, yellow, becoming ferruginous, rarely becoming green, flesh of the same colour; stem *somewhat hollow, attenuated-rooting*, fibrillose, yellow becoming ferruginous; gills somewhat adnate, broad, sometimes rounded, sometimes decurrent, *pallid* then ferruginous; veil sometimes fibrillose, sometimes woven; spores purely ferruginous. Odour becoming disagreeable.

On old stumps. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

Var. **salicicola**. On willow. Sept.

Pileus somewhat gibbous, smooth, rarely at first floccoso-scaly; gills at first pallid-yellowish.

Loch-an-Eilan. Rev. J. Keith.

324. A. flavidus * Schaeff. *Fr. Hym. Eur. p.* 248. *C. Hbk. No.* 345.

On fir. Aug.

East. Tweed —— Tay Dee —— ——
West. —— Clyde —— Ross

England. Europe. America. Siberia. India. Teneriffe.

325. A. conissans * Fr. *Hym. Eur. p.* 249. *B. & Br. No.* 1243.

Pileus fleshy, thin, convexo-flattened, equal, moist, smooth, yellowish-tan, slightly viscid; stem hollow, *silky-fibrillose*, not rooting, equal or attenuated at the base, *pallid*, pale yellowish, not becoming ferruginous; gills adnate, thin, very crowded, *pallid, then dingy clay-coloured.*

Shedding *very copious ferruginous spores.*

Sometimes confounded with *A. fasciculuris.*

In open woods, roadsides, &c. Sept.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

326. A. inopus * Fr. *Hym. Eur. p.* 249. *C. Hbk. No.* 346.

In Scotch fir wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood. J. S.

England. Europe.

327. A. apicreus * Fr. *Hym. Eur. p.* 249. *B. & Br. No.* 1529.

Somewhat cæspitose; pileus fleshy, thin, nearly plane, even, smooth, moist; stem hollow, equal, not rooting, pallid, base and fibrils ferruginous; gills adnate, crowded, thin, *shining ferruginous.*

In pine wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1874. J. S.

Europe.

328. A. hybridus * Fr. *Hym. Eur. p.* 250. *C. Hbk. No.* 347.

On fir stumps. Oct.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

329. A. sapineus* Fr. *Hym. Eur. p.* 251. *C. Hbk. No.* 349.
On sawdust. Aug.—Sept.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Australia. New Zealand. Ceylon. Cuba. Aru.

330. A. helomorphus Fr. *Hym. Eur. p.* 252. *C. Hbk. No.* 338.
In fir woods. Nov.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Roxburgh, 1868. A. Jerdon.
Europe.

331. A. scambus* Fr. *Hym. Eur. p.* 253. *C. Hbk. No.* 339.
In pine woods. Sept.—Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

23.—NAUCORIA Fr.

332. A. cucumis* Pers. *Fr. Hym. Eur. p.* 255. *C. Hbk. No.* 358.
On the ground and fallen branches. Aug.—Nov.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

333. A. rimulincola Rabenh. *Fr. Hym. Eur. p.* 256.
Cinnamon-coloured; pileus hemispherical, *umbilicate, plicate, slightly wrinkled tomentose;* stem somewhat excentric, short, incurved, somewhat thickened at the base; gills adnexed, somewhat distant, thick, very broad, whitish-crenulated. Spores ovoid, cinnamon-coloured.
On cut elm.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe.

334. A. melinoides* Fr. *Hym. Eur. p.* 257. *C. Hbk. No.* 361.
Lawns, roadsides, &c. June—Nov.
East. Tweed —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

335. A. nuceus * Bolt. *Fr. Hym. Eur. p.* 258. *C. Hbk. No.* 362.
In pine woods. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

336. A. siderioides * Bull. *Fr. Hym. Eur. p.* 258. *C. Hbk. No.* 363.
On stumps. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

337. A. pediades * Fr. *Hym. Eur. p.* 260. *C. Hbk. No.* 365.
Pastures, roadsides, &c. July—Sept.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Siberia. Ceylon.

338. A. semiorbicularis * Bull. *Fr. Hym. Eur. p.* 260. *C. Hbk. No.* 366.
Pastures, roadsides, &c. June—Sept.
East. Tweed —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. Cape. Ceylon. Cuba.

339. A. temulentus * Fr. *Hym. Eur. p.* 262. *B. & Br. No.* 1530.
Pileus somewhat membranaceous, campanulate then convex, somewhat umbonate, smooth, hygrophanous, slightly striate at the margin, never depressed or pelliculose, ferruginous, when dry ochraceous-tan-coloured, without striæ; veil none; stem *fistulose with a pith, thin, tough, polished, flexuose, smooth, pulverulent at the apex;* gills attenuated in front, adnate, somewhat distant, lurid then umber-ferruginous. Slender.
In open wood. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den, 1874. J. S.
Europe.

340. A. sobrius * Fr. *Hym. Eur. p.* 263. *C. Hbk. No.* 367.
In mixed woods. Sept.—Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. Ceylon.

Var. **dispersus** * Pers. *Grevillea*, ii. *p.* 115.

Pileus convex, ochraceous, delicately punctulate, 3–4 lines across, margin furfuraceous; stem thickened above or equal, furfuraceous, fistulose, $\frac{3}{4}$–1 inch high, 1 line thick; ring appendiculate; gills pallid, adnate, plane, white at the margin.

Glamis. J. S.

England. Europe.

341. A. erinaceus Fr. *Hym. Eur. p.* 263. *C. Hbk. No.* 370.

On dead wood.

East. —— —— Tay —— Moray ——

West. —— —— —— ——

England. Europe.

342. A. siparius * Fr. *Hym. Eur. p.* 263. *C. Hbk. No.* 371.

In open woods. July.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis Den. J. S.

England. Europe.

343. A. conspersus * Pers. *Fr. Hym. Eur. p.* 264. *C. Hbk. No.* 369.

On alder wood, and on oak leaves. Sept.—Oct.

East. —— —— Tay —— Moray ——

West. —— —— —— ——

England. Europe.

344. A. carpophilus Fr. *Hym. Eur. p.* 265. *C. Hbk. No.* 372.

On beech-mast and leaves. Oct.

East. —— —— —— —— Moray ——

West. —— —— —— ——

Altyre. Forres. Rev. J. Keith.

England. Europe.

345. A. graminicola* Nees. *Fr. Hym. Eur. p.* 265. *B. & Br. No.* 1532.

Pileus somewhat membranaceous, convex, *papillate*, *hairy-tomentose*, under a lens covered with *strigose hairs*, fuscous, becoming fawn-ochraceous, 3 lines broad; *stem* slender, *tough*, *hirsute*, becoming fuscous; gills slightly adnexed, somewhat distant, pallid-ochraceous.

A very rare species. My specimens have confirmed the opinion that it is a true *Inocybe*.

In open wood. Oct.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis Den, 1874. J. S.

Europe.

24.—PLUTEOLUS Fr.

25.—GALERA Fr.

346. A. lateritius * Fr. *Hym. Eur. p.* 267. *C. Hbk. No.* 376.

In pastures.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. Ceylon.

347. A. tener * Schaeff. *Fr. Hym. Eur. p.* 267. *C. Hbk. No.* 377.

Pastures and grassy places in woods. June—Oct. 2000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross

England. Europe. America. Australia. Tasmania. India. Teneriffe. Bermuda.

348. A. ovalis * Fr. *Hym. Eur. p.* 268. *C. Hbk. No.* 375.

On dung. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— Ross

England. Europe.

349. A. sparteus * Fr. *Hym. Eur. p.* 269. *C. Hbk. No.* 380.

Among moss. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

350. A. vittaeformis Fr. *Hym. Eur. p.* 269.

Pileus membranaceous, conico-campanulate, papillate, *margin striate, somewhat bay-coloured*, brown-ferruginous, with a broad smoothed disc which is rarely prominent in a papilla, 3–5 lines high and broad; stem equal, supple, even, under a lens slightly rough with hairs, rust-coloured, becoming yellow only at the apex; gills adnate, ascending, linear, clay-coloured, then cinnamon.

Among moss. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
Europe.

351. A. hypnorum* Batsch. *Fr.Hym.Eur.p.270. C.Hbk. No.382.*
Among moss. July—Oct. 2700 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America. Siberia. Australia. Kerguelen's Land.

Var. **sphagnorum** Pers. On Sphagnum. Dee. Moray.

352. A. mniophilus Lasch. *Fr. Hym. Eur. p. 270.*
Pileus membranaceous, campanulate, somewhat papillate, striate, disc even, *fuscous-yellowish*, when dry almost clay-coloured, ½ inch and more broad; stem equal, pliant, yellow, fibrillose, *mealy at the apex*, floccose at the base, 2–3 inches long, a line thick; gills obtusely adnate, plano-ascending, broad, somewhat distant, dingy, *yellowish*-ochraceous.
On *Mnium*.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe.

26.—TUBARIA Worth. Sm.

353. A. cupularis* Bull. *Fr.Hym.Eur.p.272. B.&Br. No.1657.*
Pileus slightly fleshy, plano-depressed, obtuse, even, *smooth*, rufescent, then yellowish, hygrophanous, scarcely an inch broad; stem fistulose, naked, attenuated upwards, whitish, 2 inches and more long, slender; gills decurrent, crowded, tawny.
On heathy ground. Aug. 1000 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Creag Maoiseach, Strathtay, 1877. J. S.
Europe.

354. A. furfuraceus* Pers. *Fr.Hym Eur.p.272. C.Hbk. No.387.*
On twigs, sticks, &c. April—Oct. 1500 ft.
East. Tweed Forth Tay Dee —— ——
West. —— Clyde Argyle Ross
England. Europe. America. Arctic. Cape. Ceylon. Australia. Tasmania. Kergueland's Land.

355. A. paludosus Fr. *Hym. Eur. p. 273. C. Hbk. No. 385.*
On marshy ground.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
England. Europe.

356. A. embolus * Fr. *Hym. Eur. p.* 274. *C. Hbk. No.* 381.
On moor ground. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

357. A. inquilinus * Fr. *Hym. Eur. p.* 274. *C. Hbk. No.* 386.
On wood. Aug.—Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

27.—CREPIDOTUS Fr.

358. A. alveolus * Lasch. *Fr.Hym.Eur.p.*275. *C.Hbk. No.*352.
On oak. Oct.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Fungus Show, 1878.
England. Europe.

359. A. mollis* Schaeff. *Fr. Hym. Eur. p.* 275. *C. Hbk. No.* 353.
On sticks and sawdust. Sept.—Oct.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America. Australia.

360. A. calolepis * Fr. *Hym. Eur. p.* 276. *B. & Br. No.* 1765.
Pileus slightly fleshy, dimidiate, *sessile on a small villous knot*, margined with white behind, *beautifully variegated* with minute, crowded, rufescent *scales*, scarcely ½ inch broad, flesh firm, not gelatinous; *gills concurrent at the base*, at length fuscous-ferruginous. Spores fuscous-ferruginous.
On dead wood. Oct.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Fungus Show, 1878. J. S.
Europe.

361. A. rubi * Berk. *Fr. Hym. Eur. p.* 276. *C. Hbk. No.* 355.
On dead bramble. Aug.—Oct.
East. —— —— Tay —— Moray ——
West. —— Clyde —— ——
England.

362. A. Phillipsii B. & Br. *No.* 1658.

Small, slightly umber; pileus oblique, striate, smooth, about 3 lines across; stem incurved at the base, solid, 1–1½ inch high; gills narrow, ventricose, shortly adnate. Spores ·0002 inch long.
A very distinct species.

On dead grass. Oct.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Penicuik, 1874. W. Phillips.
England.

SERIES IV.—PRATELLAE. *Spores purple.*

28.—CHITONIA FR.

29.—PSALLIOTA FR.

363. A. arvensis* Schaeff. *Fr. Hym. Eur. p.* 278. *C. Hbk. No.* 389.

Meadows and borders of fields. Aug.—Oct.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. Cape. Ceylon. Tasmania. New Zealand.

364. A. campestris* L. *Fr. Hym. Eur. p.* 280. *C. Hbk. No.* 390.

In pastures. July—Oct. 1000 ft.
East. Tweed Forth Tay Dee Moray Sutherland
West. Solway Clyde Argyle Ross Shetland Orkney
England. Europe. America. Siberia. Ceylon. St. Helena. Australia. Tasmania. New Zealand. Kergueland's Land.

Var. **silvicola*** Vitt. Glamis. J. S.

Var. **rufescens*** Berk. Glamis. J. S.

365. A. silvaticus* Schaeff. *Fr. Hym. Eur. p.* 280. *C. Hbk. No.* 391.

In woods. July.
East. —— —— Tay Dee —— ——
West.
England. Europe. America. India. Ceylon.

30.—PILOSACE Fr.

31.—STROPHARIA Fr.

366. A. aeruginosus* Curt. *Fr.Hym.Eur.p.*284. *C.Hbk. No.*395.
In woods and meadows. July—Nov. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

367. A. albo-cyaneus* Desm. *Fr. Hym. Eur. p.* 284. *C. Hbk. No.* 396.
In meadows and fields. Sept.—Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

368. A. inunctus Fr. *Hym. Eur. p.* 284. *B. & Br. No.* 1229.
Pileus fleshy, soft, even, smooth, somewhat umbonate, with an evanescent, livid-purple gluten, pellicle easily separable, becoming very pale, 2 inches across; stem soft, flexuose, stuffed, composed of fibres, white, silky-fibrillose below the distant fugacious ring, 2½ inches high, ¼ inch thick; gills adnate, ventricose, pale fuscous. Spores purplish-brown, ·00028 inch long.
Resembles some states of *A. aeruginosus*, but the spores are of a different colour and much smaller.
In pastures. Oct.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Fungus Show, 1878.
England. Europe.

369. A. obturatus Fr. *Hym. Eur. p.* 285. *C. Hbk. No.* 397.
On the ground among grass.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Melrose. A. Jerdon.
England. Europe.

370. A. melaspermus* Bull. *Fr.Hym.Eur.p.*285. *C.Hbk. No.*398.
In borders of thickets. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. Siberia.

371. **A. squamosus** * Pers. *Fr. Hym. Eur. p.* 285. *C. Hbk. No.* 399.

In woods and open ground. Sept.—Oct.

East. Tweed Forth Tay —— —— ——
West. —— Clyde Argyle Ross
England. Europe.

Var. **thraustus** Kalchbr. *B. & Br. No.* 1659. *Grevillea*, vi. p. 101.

Subgregarious, hygrophanous; pileus fleshy, conical, then expanded, rather viscid, smooth, margin even, cinnamon-orange; stem stuffed, soon hollow, nearly equal, or slightly thickened downwards, pulverulent, white, smooth above the ring, rufescent, tawny below and floccose; gills broadly adnate, slightly emarginate, distant, somewhat ventricose, at first cinereous, becoming blackish spotted. Spores oblong ovate, ·015 mm. long. Odour none. Taste watery. Fries considers it a variety of *A. squamosus.*

In woods.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe.

372. **A. stercorarius** * Fr. *Hym. Eur. p.* 287. *C. Hbk. No.* 400.

On dung. Aug.—Nov. 3800 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe.

373. **A. semiglobatus** * Batsch. *Fr. Hym. Eur. p.* 287. *C. Hbk. No.* 401.

On dung. April—Nov. 2200 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Siberia. India.
Australia. Tasmania. New Zealand.

374. **A. caput-Medusae** * Fr. *Hym. Eur. p.* 288. *B. & Br. No.* 1536.

Pileus fleshy, fragile, ovate, then expanded, lacunose, squamulose, discoid, umber at the top, somewhat tan-coloured at the circumference, granulose and rimose-scaly with the fugitive veil; stem hollow upwards, *wrapped round with imbricated, squarrose, evanescent scales* below the superior ring, equally attenuated from the solid base, 2–3 inches long, ½ inch thick, whitish, ring almost same as that of *A. procerus* but persistent, swollen and fuscous at the circumference; gills attached, ventricose, clay-coloured, then pallid umber.

The universal fuscous scaly veil remaining on the stem, forming concentric, imbricated, squarroso-recurved zones. *Spores fuscous-purple.* Striking; rare.

On sandy soil in Scotch fir wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1874, 1875. J. S.
Europe.

375. A. scobinaceus * Fr. *Hym. Eur. p.* 288. *B. & Br. No.* 1660.

Pileus fleshy, thin, hemispherical, then expanded, *gibbous, slightly sulcate,* covered with crowded, adpressed, fugitive, blackish scales, at first fuscous, then greyish-violet at the circumference, livid, then becoming yellow in the centre; stem hollow, fibrillose, attenuated from the thickened base, white, mealy at the apex, the superior ring fugacious; gills adnate, crowded, crenulate, white-rufescent, becoming purplish. Moist and fragile.

On or near stumps. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1876, 1878. Dun, 1877. J. S.
Europe.

In October 1876 I gathered an exceedingly fasciculate Agaric which I could not refer to either *A. caput-Medusae* or *A. scobinaceus*, but which combined characters of both. On submitting it to Mr. Berkeley, he pronounced it to be exactly intermediate between the two.

376. A. Jerdoni B. & Br. *Fr. Hym. Eur. p.* 289. *C. Hbk. No.* 393.

On fir stumps. Sept.—Nov.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——

Mossburnford. A. Jerdon. Rothiemurchus. Rev. J. Keith.

32.—HYPHOLOMA Fr.

377. A. silaceus* Pers. *Fr. Hym. Eur. p.* 290. *B. & Br. No.* 1498.

Pileus fleshy, convex, viscous, orange-rufous, silky round the margin, whitish; stem stuffed, then hollow, *bulbous*, shining, fibrilloso-striate; gills adnate, crowded, grey, then olive. Pileus and stem 3 inches. Spores pale purple-brown. Odour of meal.

In old pasture. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Park, 1874. J. S.
Europe.

378. A. sublateritius* Schaeff. *Fr. Hym. Eur. p.* 290. *C. Hbk. No.* 402.

On old stumps. April—Dec. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America. India. Ceylon.

379. A. capnoides* Fr. *Hym. Eur. p.* 291. *C. Hbk. No.* 403.

In woods, chiefly pine. Nov.—Dec.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

380. A. epixanthus* Fr. *Hym. Eur. p.* 291. *C. Hbk. No.* 404.

On fir stumps. Aug.—Dec.

East. Tweed —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

381. A. fascicularis* Huds. *Fr. Hym. Eur. p.* 291. *C. Hbk. No.* 405.

On old stumps, &c. April—Dec. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. India. Ceylon.
Australia. Tasmania. New Zealand.

382. A. dispersus* Fr. *Hym. Eur. p.* 292. *C. Hbk. No.* 406.

On pine stumps. April—Nov.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Australia. Tasmania.

383. A. storea Fr. *Hym. Eur. p.* 293. *B. & Br. No.* 1418.

Pileus fleshy, convexo-plane, umbonate, at length depressed round the umbo, dry, *fibrillose* with longitudinal hairs which are confluent with the veil, nearly 3 inches broad, pale fuscous, then dingy isabelline; *stem solid*, firm, elongated, equal, even, somewhat fibrillose, pallid, 4–5 inches long, 4 lines thick; gills adnate, dry, becoming livid-fuscous, serrulate and white at the edge. Rare.

At roots of trees. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glencarse. Perth Fungus Show, 1875.
England. Europe.

384. A. lachrymabundus* Fr. *Hym. Eur. p.* 293. *C. Hbk. No.* 407.
On trunks and on the ground. Sept.—Oct.
East. Tweed —— Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe.

385. A. velutinus* Pers. *Fr. Hym. Eur. p.* 293. *C. Hbk. No.* 408.
On old stumps. July—Aug.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

386. A. cascus Fr. *Hym. Eur. p.* 294. *B. & Br. No.* 1537.
Pileus somewhat fleshy, oval, then expanded, soft, *smoothed, slightly wrinkled*, grey-tan-colour, *becoming pale*, disc obtuse, even, 1½–2½ inches broad; stem hollow, equal, fibrillose, white, somewhat pruinose, 3–4 inches long, 2–3 lines thick; gills rounded-adnexed, *ventricose, dry, very broad*, 4 lines, *grey*, then blackish-fuscous, whitish at the edge. Gregarious; very fragile.
In wood.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe.

387. A. lanaripes Cooke. *Fr. Hym. Eur. p.* 295. *C. Hbk. No.* 410.
In a stove. July.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Dalvey. Rev. J. Keith.
England.

388. A. Candolleanus Fr. *Hym. Eur. p.* 295. *C. Hbk. No.* 409.
On stumps and on the ground. Oct.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Cluny Hill, Forres. Rev. J. Keith.
England. Europe. Siberia.

389. A. appendiculatus* Bull. *Fr. Hym. Eur. p.* 296. *C. Hbk. No.* 411.
On old stumps. June—Oct.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. New Zealand.

33.—PSILOCYBE Fr.

390. A. ericaeus Pers. *Fr. Hym. Eur. p.* 298. *C. Hbk. No.* 416.

In woods. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.
England. Europe.

391. A. areolatus Klotzsch. *Fr. Hym. Eur. p.* 298. *C. Hbk. No.* 414

In gardens.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Glasgow Botanic Garden. Klotzsch.

392. A. agrarius* Fr. *Hym. Eur. p.* 299. *B. & Br. No.* 1257.

Pileus slightly fleshy, convex, then flattened, smooth, *white, not hygrophanous,* 1 inch and more; stem fistulose, smooth, equal, without a veil, 1½-2 inches long, 1-2 lines thick; gills obtusely adnate, somewhat distant, linear, *white,* at length fuscous.

Remarkable for the opaque white colour of the lower part of the stem, which becomes cinereous in drying.

On the ground in wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Kinnoull Hill. J. S.
England. Europe.

393. A. ammophilus Mont & Dur. *Fr. Hym. Eur. p.* 299. *B. & Br. No.* 1661.

Pileus somewhat fleshy, hemispherical, then umbo-form; stem at length soft, hollow, *buried* to the middle in sand, *clavate at the base;* gills somewhat decurrent with a tooth, smoky with the black pulverulent spores.

On sandy ground on the sea-shore.

East. —— —— Tay —— —— ——
West. —— —— —— ——

St. Andrews. Rev. M. L. Anderson.
Algeria.

394. A. chondrodermus* B. & Br. *No.* 1538.

Pileus campanulate, fleshy, very smooth with the exception of the appendiculate margin, even, bay-brown, here and there cracked, 1 inch across, veil woven and jagged; stem nearly equal, 2½ lines thick above, 3 at the base, fistulose, paler, fibrillose, scaly at the

base; gills ventricose, attached, retreating, margin white. Spores ·00025 inch long, half as much wide, almost oblong, purple-black. Pileus stains paper yellow.

In Scotch fir wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1875. Ewnie Wood, 1877. J.S.

395. A. bullaceus * Bull. *Fr.Hym.Eur. p.*299. *C.Hbk. No.*435.

On horse-dung. Aug.—Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.
England. Europe. Ceylon.

396. A. physaloides * Bull. *Fr.Hym.Eur.p.*300. *C.Hbk. No.*436.

On dung. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

397. A. atro-rufus * Schaeff. *Fr. Hym. Eur. p.* 300. *B. & Br. No.* 1770.

Pileus slightly fleshy, hemispherico-convex, *obtuse, smooth, margin slightly striate*, dark rufous or purple-fuscous, when dry faded, even; stem fistulose, thin, equal, pallid bay-brown; gills somewhat decurrent, broad, plane, umber.

In mixed wood. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1876. J. S.
Europe. Marion Isle.

398. A. comptus * Fr. *Hym. Eur. p.* 301. *C. Hbk. No.* 415.

In mixed wood. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England.

399. A. semilanceatus * Fr. *Hym. Eur. p.* 301. *C. Hbk. No.* 417.

In pastures and roadsides. Aug.—Oct. 1200 ft.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe.

400. A. spadiceus * Fr. *Hym. Eur. p.* 302. *C. Hbk. No.* 418.

On stumps, &c. Aug.—Nov.

East. —— —— Tay —— —— ——
West. —— Clyde —— Ross
England. Europe. Tasmania.

Var. **hygrophilus** * Fr. *Hym. Eur. p.* 302. *B. & Br. No.* 1771.

Pileus fuscous, then tan-colour; stem 4–6 inches long, rooting in a somewhat fusiform manner; gills *emarginate, deeply decurrent in the form of lines*, at length fuscous-umber.

Glamis, Nov. 1874. J. S.

401. A. cernuus * Fl. Dan. *Fr. Hym. Eur. p.* 302. *C. Hbk. No.* 419.

On dead wood. Aug.—Nov.

East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. Ceylon.

402. A. foenisecii * Pers. *Fr. Hym. Eur. p.* 303. *C. Hbk. No.* 421.

In pastures, roadsides, &c. April—Sept. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

403. A. scobicola * B. & Br. *No.* 1769.

Pileus convex, umbilicate, white, smooth; stem fibrillose, nearly equal, or dilated at the apex, fistulose; gills broadly adnexed.

On pine sawdust. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Glen of Ogilvy, 1877. J. S.

34.—PSATHYRA Fr.

404. A. conopileus Fr. *Hym. Eur. p.* 304. *C. Hbk. No.* 422.

In gardens. Oct.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Waterside, Forres. Rev. J. Keith.
England. Europe.

405. A. corrugis* Pers. *Fr. Hym. Eur. p.* 305. *C. Hbk. No.* 424.
In pastures. Sept.—Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

406. A. spadiceo-griseus* Schaeff. *Fr. Hym. Eur. p.* 306. *C. Hbk. No.* 426.
On wood. Oct.—Nov.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Ceylon.

407. A. obtusatus* Fr. *Hym. Eur. p.* 306. *C. Hbk. No.* 427.
In mixed wood. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. Ceylon.

408. A. bifrons* Berk. *Fr. Hym. Eur. p.* 307. *C. Hbk. No.* 425.
In open wood. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

409. A. pennatus* Fr. *Hym. Eur. p.* 308. *C. Hbk. No.* 430.
On sawdust. June.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

Series V.—COPRINARII. *Spores black.*

35.—PANAEOLUS Fr.

410. A. separatus* L. *Fr. Hym. Eur. p.* 310. *C. Hbk. No.* 437.
On dung. July—Nov.
East. Tweed Forth Tay —— —— ——
West. Solway Clyde —— Ross
England. Europe.

411. A. fimiputris * Bull. *Fr.Hym.Eur.p.*310. *C.Hbk. No.*439.

On dung. April—Nov. 1000 ft.

East. Tweed Forth Tay Dee Moray ——

West. Solway Clyde —— Ross

England. Europe. America.

412. A. retirugis * Fr. *Hym. Eur. p.* 310. *C. Hbk. No.* 441.

On dung. Aug.—Nov.

East. —— —— Tay —— Moray ——

West. —— —— —— Ross

England. Europe.

413. A. sphinctrinus * Fr. *Hym. Eur.p.* 311. *B. & Br. No.* 1662.

Pileus slightly fleshy, parabolic, obtuse, opaque, even, moist, when dry slightly silky, at first appendiculate with the white veil, when moist smooth, blackish-fuliginous, when dry livid, flesh thin, umber; stem equal, straight, fragile, *fuliginous-grey*, pruinose at the *even apex*, rufescent only at the base, 2–3 inches long, 1 line thick; gills adnate, crowded, cinereous-blackish, of the same colour at the edge.

On dung. Oct.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis, 1876. J. S.

Europe.

414. A. campanulatus * L. *Fr.Hym.Eur.p.*311. *C.Hbk. No.*442.

On dung. June—Nov. 1000 ft.

East. Tweed Forth Tay Dee Moray ——

West. Solway Clyde Argyle Ross

England. Europe. America. Australia. Ceylon. Cuba. Aru.

415. A. papilionaceus * Bull. *Fr. Hym. Eur. p.* 311. *C. Hbk. No.* 443.

On dung. July—Nov.

East. —— Forth Tay —— Moray ——

West. —— Clyde —— Ross

England. Europe. America. Siberia. Australia. Ceylon. Teneriffe. Bermuda.

416. A. caliginosus* Jungh. *Fr. Hym. Eur. p.* 312. *B. & Br. No.* 1540.

Pileus slightly fleshy, campanulate, obtuse, even, smooth, brown; stem equal, *even, naked, of the same colour;* gills slightly adnexed, ascending, lanceolate, fuliginous-black.

In rich pasture. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Park, 1874. J. S.
Europe. Ceylon.

36.—PSATHYRELLA Fr.

417. A. gracilis* Fr. *Hym. Eur. p.* 313. *C. Hbk. No.* 447.

Waysides, hedgerows, &c. July—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. India.

418. A. hiascens Fr. *Hym. Eur. p.* 314. *C. Hbk. No.* 448.

Grassy places and hedges.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe. Ceylon.

419. A. pronus* Fr. *Hym. Eur. p.* 315. *C. Hbk. No.* 450.

In grassy places. Aug.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. Rescobie. J. S.
England. Europe.

420. A. atomatus* Fr. *Hym. Eur. p.* 315. *C. Hbk. No.* 451.

In open woods. July.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe.

421. A. disseminatus* Pers. *Fr.Hym.Eur.p.*316. *C.Hbk. No.*452.

About stumps. Aug.—Nov.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe. America. Siberia. Australia. Tasmania. Ceylon.

II. MONTAGNITES Fr.

III. COPRINUS Pers.

422. C. comatus * Fl. Dan. *Fr.Hym.Eur.p.*320. *C.Hbk. No.*453.

In pastures and waste ground. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——
England. Europe. America. India.

423. C. sterquilinus * Fr. *Hym. Eur. p.* 321. *C. Hbk. No.* 455.

On dung. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

424. C. atramentarius * Bull. *Fr. Hym. Eur. p.* 322. *C. Hbk. No.* 456.

On rich soil. May—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America.

425. C. fuscescens * Schaeff. *Fr.Hym.Eur.p.*322. *C.Hbk. No.*457.

On stumps. Aug.

East. —— —— Tay —— —— ——
West. —— Clyde Argyle Ross
England. Europe. America. Ceylon.

426. C. flocculosus D.C. *Fr. Hym. Eur. p.* 323. *C. Hbk. No.* 461.

In garden ground. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Dundee. W. M. Ogilvie.
England. Europe.

427. C. extinctorius * Bull. *Fr.Hym.Eur.p.*324. *C.Hbk. No.*462.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe. Ceylon.

428. C. fimetarius L. *Fr. Hym. Eur. p.* 324. *C. Hbk. No.* 463.
On dung. May.
East. —— —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. New Zealand.

429. C. tomentosus Bull. *Fr.Hym.Eur.p.*325. *C.Hbk. No.* 464.
On dung. Sept.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

430. C. niveus * Pers. *Fr. Hym. Eur. p.* 325. *C. Hbk. No.* 465.
On horse and deer dung. Sept.—Nov. 2350 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America.

431. C. micaceus* Bull. *Fr. Hym. Eur. p.* 325. *C. Hbk. No.* 466.
On stumps. April—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America.

432. C. deliquescens * Bull. *Fr.Hym.Eur.p.*327. *C.Hbk.No.*469.
On old stumps. Aug.
East. —— —— Tay —— —— ——
West. Solway Clyde —— Ross
England. Europe.

433. C. Hendersonii Berk. *Fr.Hym.Eur.p.*329. *C.Hbk. No.*470.
On horse-dung. Sept.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Rothiemurchus. Rev. J. Keith.
England. Europe.

434. C. lagopus Fr. *Hym. Eur. p.* 329. *C. Hbk. No.* 472.
On rich soil. Aug.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Waterford, Forres. Rev. J. Keith.
England. Europe.

435. **C. macrocephalus** * Berk. *Fr. Hym. Eur. p.* 329. *C.Hbk. No.* 471.

On dung. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England.

436. **C. radiatus** * Bolt. *Fr. Hym. Eur. p.* 330. *C. Hbk. No.* 474.

On horse-dung. Jan.—Dec. 2350 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America.

437. **C. ephemerus** * Bull. *Fr. Hym. Eur. p.* 331. *C.Hbk. No.* 476.

On dung. May—Oct.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe. America. Cape. Australia.

438. **C. plicatilis** * Curt. *Fr. Hym. Eur. p.* 331. *C.Hbk. No.* 477.

Pastures, roadsides, &c. April—Oct. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross

England. Europe. America. Ceylon.

439. **C. hemerobius** * Fr. *Hym. Eur. p.* 332. *C. Hbk. No.* 479.

In damp shady places. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den. J. S.
England. Europe.

IV. BOLBITIUS Fr.

440. **B. hydrophilus** * Bull. *Fr. Hym. Eur. p.* 333. *A. hydrophilus. C. Hbk. No.* 413.

In woods and on sawdust. July—Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

441. B. Boltonii * Pers. *Fr. Hym. Eur. p.* 333. *C. Hbk. No.* 481.

On dung. May.

East. —— —— Tay —— —— ——

West. —— —— —— ——

England. Europe.

442. B. fragilis * L. *Fr. Hym. Eur. p.* 334. *C. Hbk. No.* 482.

On dung. June—Sept.

East. —— —— Tay Dee Moray ——

West. —— Clyde —— ——

England. Europe. Australia.

443. B. titubans * Bull. *Fr. Hym. Eur. p.* 334. *C. Hbk. No.* 483.

Among grass in rich soil. July—Sept.

East. Tweed Forth Tay —— Moray ——

West. —— Clyde —— ——

England. Europe. Australia.

444. B. tener * Berk. *Fr. Hym. Eur. p.* 335. *C. Hbk. No.* 485.

On rich ground. Sept.

East. —— —— Tay Dee —— ——

West. —— —— —— ——

England. Europe.

V. CORTINARIUS Fr.

1.—PHLEGMACIUM Fr.

445. C. triumphans Fr. *Hym. Eur. p.* 336. *B. & Br. No.* 1263.

Pileus fleshy, convex, then flattened, viscid, even, yellow, at first spotted with darker, adpressed, evanescent scales; stem solid, clavate, sheathed with *many concentric, squamose, tawny rings;* gills emarginate, crowded, quite entire, pallid, then clay-coloured. Large, handsome.

In grassy grove. Sept.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Moncreiffe. Sir T. Moncreiffe, Bart.

England. Europe.

446. C. claricolor* Fr. *Hym. Eur. p.* 336. *B. & Br. No.* 1541.

Pileus compact, flattened, smooth, when dry shining, often broken into scales, yellow, flesh white; stem solid, attenuated, at first *floccoso-squamose*, in the full-grown plant becoming wholly naked, *white, as well as the veil;* gills somewhat adnexed, crowded, serrated, grey-whitish, then pallid. Very stout, hard.

In mixed woods. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875. Moncreiffe. Killin. Kippendavie. J. S.
Europe.

447. C. turmalis* Fr. *Hym. Eur. p.* 336. *B. & Br. No.* 1774.

Pileus fleshy, convexo-plane, even, viscid, smooth, discoid, yellow-ochraceous, shining, at first flocculose-silky with the veil, soon naked, smooth (or obsoletely streaked), not cracked on account of the soft flesh which is white; stem *cylindrical*, white, *at first sheathed with the white woolly veil*, then naked, sometimes 3, sometimes 6 inches long, rather attenuated than thickened at the base; veil superior, fibrillose, annular, persistent; gills emarginate or decurrent, crowded, somewhat serrated, whitish, then clay-coloured, never turning bluish-grey.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
Europe.

448. C. sebaceus* Fr. *Hym. Eur. p.* 337. *B. & Br. No.* 1542.

Growing pale; pileus fleshy, incurved-expanded, somewhat repand, *whitish with the pruinose veil*, slightly viscid, flesh white, as well as the partial, very fugacious veil, unicolorous, tan, 2½–5 inches broad; stem solid, stout, equal, fibrillose, often twisted and compressed, 3–4 inches long, ½–1 inch thick; gills emarginate, not crowded, at length broad, clay-coloured, pallid cinnamon-coloured (never bluish-grey), but whitish at the sides.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
Europe.

449. C. cyanopus* Secr. *Fr. Hym. Eur. p.* 338. *C. Hbk. No.* 488.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——

England. Europe.

450. C. russus Fr. *Hym. Eur. p.* 341. *C. Hbk. No.* 489.
In woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

451. C. multiformis Fr. *Hym. Eur. p.* 343. *C. Hbk. No.* 491.
In woods. Aug.—Sept.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Altyre. Darnaway. Rev. J. Keith.
England. Europe.

452. C. glaucopus Schaeff. *Fr. Hym. Eur. p.* 344. *C. Hbk. No.* 492.
In pine woods. Aug.—Sept.
East. —— Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

453. C. porphyropus A. & S. *Hym. Eur. p.* 345. *C. Calochrous* Weinm. *C. Hbk. No.* 493.
In woods and pastures.
East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe. America.

454. C. cærulescens* Fr. *Hym. Eur. p.* 345. *C. Hbk. No.* 494.
In mixed woods. Aug.—Oct.
East. —— Forth Tay —— Moray ——
West. —— —— —— Ross
England. Europe. America.

455. C. purpurascens* Fr. *Hym. Eur. p.* 345. *C. Hbk. No.* 495.
In mixed woods. Sept.—Oct.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe.

456. C. scaurus Fr. *Hym. Eur. p.* 349. *C. Hbk. No.* 499.
In woods. Oct.
East. —— —— —— —— —— ——
West. —— Clyde —— ——
Glasgow. Klotzsch, in Hook. Herb.
England. Europe. America.

457. C. decoloratus Fr. *Hym. Eur. p.* 351.

Pileus fleshy, thin, expanded, obtuse, viscous, even, *soon dry flocculose, faded*, equal, 3–4 inches broad, clay-coloured, disc here and there darker; stem 3 inches long, scarcely ½ inch thick, attenuated from the thickened base, fibrilloso-striate, *silvery*, naked at the apex, becoming yellow here and there at the base; gills emarginate, somewhat crowded, 3–4 lines broad, whitish or bluish-grey, then clay-coloured-cinnamon. Flesh soft, white, slightly bluish-grey at the apex of the stem. Veil white.

In woods. Oct.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Fungus Show, 1878.
England. Europe.

2.—MYXACIUM Fr.

458. C. collinitus * Sow. *Fr. Hym. Eur. p.* 354. *C. Hbk. No.* 501.

In mixed woods. July—Oct.
East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— Ross
England. Europe. America.

459. C. elatior * Fr. *Hym. Eur. p.* 355. *C. Hbk. No.* 502.

In mixed woods. Sept.—Nov.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe.

460. C. livido-ochraceus * Berk. *Fr. Hym. Eur. p.* 356. *C. Hbk. No.* 504.

In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Moncreiffe. Sir T. Moncreiffe, Bart.
England.

461. C. pluvius * Fr. *Hym. Eur. p.* 359. *B. & Br. No.* 1267.

Pileus slightly fleshy, globose, then convex, scarcely umbonate, smooth, viscid, hygrophanous, pale yellow-ochraceous, ½–1 inch broad, veil white; stem stuffed, then hollow, *slender, nearly equal*,

soft, becoming pallid-white, sometimes short, sometimes elongated to 3 inches, 2–3 lines thick; gills decurrent, then retreating, at length free, crowded, white, then ochraceous.

In mixed woods. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1875. J. S.
England. Europe.

3.—INOLOMA Fr.

462. C. violaceus * L. *Fr. Hym. Eur. p.* 360. *C. Hbk. No.* 505.

In woods and open ground. Sept.—Oct. 1200 ft.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— Ross

England. Europe. America. India.

463. C. traganus Fr. *Hym. Eur. p.* 362. *B. & Br. No.* 1499.

Pileus fleshy, obtuse, *lilac-fibrillose*, then become smooth and faded, easily distinguished by becoming at length externally and internally yellow; stem bulbous, spongy, *white-violaceous, saffron-yellow internally;* gills emarginate, thick, crenate, distant, *at first saffron-ochraceous, never becoming violet-coloured.* Odour of goat, stinking.

In pine woods. Aug.

East. —— —— —— —— Moray ——
West. Solway —— —— ——

Forres, &c. Rev. J. Keith. New Galloway. J. M'Andrew.
Europe.

Var. **finitimus** Weinm. *B. & Br. No.* 1499.

Pileus silky, at length smooth, lilac, as is the stem, which is yellowish and mottled within, but not saffron-coloured nor brown. Smell not at all that of the typical form, but pleasant though peculiar, resembling that of gum just beginning to ferment.

This peculiar form is the more interesting as it has not been met with in Sweden.

Forres. Rev. J. Keith.

464. C. tophaceus Var. **redimitus** * Fr. *Hym. Eur. p.* 363. *B. & Br. No.* 1545.

Pileus at length broadly gibbous, golden-yellow, variegated *with darker adpressed fibrils;* stem fibrillose-striate, slightly thickened at the base.

In mixed woods. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875. J. S.
Europe.

465. C. callisteus Fr. *Hym. Eur. p.* 363. *C. Hbk. No.* 507.
In woods. July.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

466. C. Bulliardi Pers. *Fr. Hym. Eur. p.* 363. *C. Hbk. No.* 508.
In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— Clyde —— ——
Balnamoon. Rev. M. L. Anderson.
England. Europe.

467. C. bolaris * Pers. *Fr. Hym. Eur. p.* 364. *C. Hbk. No.* 509.
In beech woods. Sept.—Oct.
East. —— —— Tay —— Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

468. C. pholideus * Fr. *Hym. Eur. p.* 364. *C. Hbk. No.* 510.
In mixed woods. Sept.—Oct.
East. Tweed —— Tay —— Moray ——
West. —— —— —— Ross
England. Europe. America.

469. C. arenatus Pers. *Fr. Hym. Eur. p.* 365. *C. Hbk. No.* 512.
In woods. Aug.—Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

4.—DERMOCYBE Fr.

470. C. ochroleucus * Schaeff. *Fr. Hym. Eur. p.* 366. *C. Hbk. No.* 513.
In mixed woods. Oct.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

471. C. tabularis Fr. *Hym. Eur. p.* 366. *C. Hbk. No.* 514.
In woods. Sept.—Oct.
East. —— —— —— Dee Moray ——
West. —— —— —— ——
England. Europe.

472. C. camurus * Fr. *Hym. Eur. p.* 367. *B. & Br. No.* 1546.

Fragile; pileus unequally fleshy, somewhat membranaceous at the margin, thin, gibbous, soon smooth, becoming hoary-fuscous, very pale, not hygrophanous, often rimosely incised, at length becoming yellow with a darker shade at the disc, 2–3 inches broad, flesh white; stem somewhat hollow, equal, curved, externally and internally white, silvery at the apex, shining; gills somewhat adnate, crowded, thin, clay-grey, becoming fuscous, quite entire at the edge which is of the same colour, never bluish-grey, 2–3 lines broad.

In mixed woods. Oct.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis. J. S.

England. Europe.

473. C. diabolicus * Fr. *Hym. Eur. p.* 367. *C. Hbk. No.* 515.

In mixed woods. Aug.—Oct.

East. —— —— Tay —— Moray ——

West. —— —— —— ——

England. Europe.

474. C. caninus * Fr. *Hym. Eur. p.* 368. *C. Hbk. No.* 516.

In mixed woods. Sept.—Oct. 1200 ft.

East. Tweed Forth Tay Dee —— ——

West. —— Clyde Argyle Ross

England. Europe.

475. C. myrtillinus * Fr. *Hym. Eur. p.* 368. *B. & Br. No.* 1547.

Pileus fleshy, gibbous, then flattened, fuliginous, becoming hoary with white silky fibrils, not rufescent, veil not sheathing, flesh at first watery fuscous, then white, becoming violet only at the apex of the stem; stem stuffed, bulbous, *silky white, not zoned*, whitish; gills adnate, *somewhat distant, amethyst-blue*, then becoming blue-clay colour.

In mixed woods. Sept.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis, Hunter's Hill, 1875. J. S. Rannoch. Dr. B. White.

Europe.

476. C. anomalus * Fr. *Hym. Eur. p.* 369. *C. Hbk. No.* 517.

In pine woods. Aug.—Oct.

East. Tweed —— Tay —— Moray ——

West. —— —— —— ——

England. Europe. America.

477. C. sanguineus* Wulf. *Fr. Hym. Eur. p.* 370. *C. Hbk. No.* 519.
In woods, chiefly pine. Sept. 1600 ft.

East.	——	Forth	Tay	——	Moray	——
West.	Solway	Clyde	——	——		

England. Europe.

478. C. cinnamomeus* L. *Fr. Hym. Eur. p.* 370. *C. Hbk. No.* 520.
In mixed woods. Aug.—Nov.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe. America.

479. C. uliginosus Berk. *Fr. Hym. Eur. p.* 371. *C. Hbk. No.* 521.
In boggy woods. Sept.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Greeshop. Rev. J. Keith.
England.

480. C. orellanus* Fr. *Hym. Eur. p.* 371. *B. & Br. No.* 1270.
Pileus fleshy, obtusely umbonate, villoso-squamulose, or fibrillose, tawny-orange, *flesh similar, becoming reddish; stem* solid, firm, nearly equal, striate-fibrillose, *tawny as well as the veil;* gills attached, broad, somewhat distant, at length opaque.
In mixed woods. Sept.—Oct. 1000 ft.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

481. C. raphanoides* Pers. *Fr. Hym. Eur. p.* 373. *C. Hbk. No.* 522.
In fir woods. Sept.

East.	——	——	Tay	Dee	——	——
West.	——	Clyde	——	——		

Europe.

482. C. venetus Fr. *Hym. Eur. p.* 374.
Pileus fleshy, thin, convexo-expanded, silky-villous, obtusely umbonate, olivaceous, *becoming yellowish-green*, opaque, 1½ 2 inches broad; stem stuffed, then hollow, firm, fibrilloso-striate, and, as well as the veil, of the same colour, often yellow-villous at the base; gills rounded-adnate, somewhat distant, veined, *yellow-olivaceous*, then olivaceous-cinnamon. Gregarious, *very distinct*. The peculiar sea-colour from which it derives its name is distinctive.
In woods. Oct.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Rannoch, 1875. Dr. B. White.
Europe.

5.—TELAMONIA Fr.

483. C. bivelus * Fr. *Hym. Eur. p.* 375. *B. & Br. No.* 1271.

Pileus fleshy, convexo-flattened, obtuse, *smooth* or silky at the margin, soft, absorbent, moist, but not truly hygrophanous, commonly very smooth, shining, often obscurely spotted, here and there rivuloso-squamulose, at length perforated, brick-tawny; stem firm, somewhat bulbous, variable, throughout spongy-fleshy, externally not firmer, sometimes short bulbous, sometimes elongated attenuated, even, perforated, dirty whitish, becoming ferruginous within, sheathed by the veil, *the spurious ring fugacious;* gills adnexed, scarcely crowded, bright, tawny-cinnamon. Mild.

In woods. Sept.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S.
England. Europe.

484. C. bulbosus Sow. *Fr. Hym. Eur. p.* 375. *C. Hbk. No.* 523.

In fir woods.

East.	——	——	——	——	——	——
West.	——	Clyde	——	——		

Glasgow. Klotzsch, in Hook. Herb.
England. Europe.

485. C. torvus * Fr. *Hym. Eur. p.* 376. *C. Hbk. No.* 524.

In mixed woods. Aug.—Oct.

East.	——	——	Tay	Dee	Moray ——
West	——	Clyde	——	Ross	

England. Europe.

486. C. plumiger * Fr. *Hym. Eur. p.* 377. *B. & Br. No.* 1550.

Pileus fleshy, thin, conical, then campanulate, *gibbous*, when more expanded *rimosely* split, becoming somewhat olivaceous-fuscous, fading, *plumose or silky with dense white flocci* which are prostrate and silky with moisture, 3 inches broad; stem solid, clavato-bulbous, floccose, somewhat annulate, becoming pale, internally watery whitish, 3–4 inches long, nearly an inch thick at the base; gills adnate, scarcely crowded, broad, violaceous, soon cinnamon-colour, the edge entire, and of the same colour. Handsome.

In mixed woods. Sept.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Hunter's Hill, 1875. J. S.
Europe.

487. C. evernius * Fr. *Hym. Eur. p.* 377. *C. Hbk. No.* 525.
In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. Kinnoull Hill. J. S.
England. Europe.

488. C. armillatus Fr. *Hym. Eur. p.* 378. *C. Hbk. No.* 526.
In mixed woods. Aug.—Sept. 1000 ft.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

489. C. limonius Fr. *Hym. Eur. p.* 379. *C. Hbk. No.* 527.
In pine woods.
Highlands. Klotzsch, in Hook. Herb.
Europe.

490. C. helvolus * Fr. *Hym. Eur. p.* 379. *B. & Br. No.* 1355.
Pileus somewhat fleshy, incurved, then flattened, smooth, hygrophanous, ferruginous-tawny, disc often darker, at length cracked, with an obtuse vanishing umbo, flesh slightly tawny, 1–3 inches broad; stem firm, stuffed, attenuated, of the same colour, *sheathed with the veil, silky, then become smooth*, terminated by a *ferruginous-margined annular zone*, silky at the apex, at length externally and internally fuscous-ferruginous, 2–3 inches long, 4 lines thick; gills emarginate, very broad, thick, somewhat distant, opaque, cinnamon-tawny.
In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill, 1874. J. S.
England. Europe.

491. C. hinnuleus * Pers. *Fr. Hym. Eur. p.* 380. *C. Hbk. No.* 528.
In mixed woods. Sept.—Oct.
East. Tweed Forth Tay —— —— ——
West. —— Clyde —— Ross
England. Europe.

492. C. gentilis * Fr. *Hym. Eur. p.* 380. *C. Hbk. No.* 529.
In woods, chiefly pine. Aug.—Oct. 1500 ft.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

493. C. helvelloides * Fr. *Hym. Eur. p.* 380. *C. Hbk. No.* 530.
In mixed woods. Aug.—Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

494. C. psammocephalus * Fr. *Hym.Eur.p.*384. *C.Hbk. No.*532.
In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

495. C. iliopodius * Fr. *Hym. Eur. p.* 385. *C. Hbk. No.* 533.
In mixed woods. Aug.—Nov.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

496. C. hemitrichus* Pers. *Fr.Hym. Eur.p.*385. *C.Hbk.No.*534.
In mixed woods. Sept.—Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Den of Dun. J. S.
England. Europe. America.

6.—HYGROCYBE Fr.

497. C. armeniacus Schaeff. *Fr.Hym.Eur.p.*387. *C.Hbk.No.*535.
In pine woods. Oct.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Brodie. Rev. J. Keith.
England. Europe. America.

498. C. duracinus * Fr. *Hym. Eur. p.* 388. *B. & Br. No.* 1776.

Pileus fleshy, thin, rigid, convexo-plane, gibbous, smooth, watery brick-colour (*tan-colour, opaque*), *margin acutely incurved* for ½ a line, whence there is an elevated ridge round the margin of the expanded fungus; stem stuffed, *rigid, unequal, rooting, smooth*, white as well as the veil, which is thin, silky on the *shortly-incurved margin*, sometimes bulbous with a fusiform root, sometimes wholly fusiform, even,

with a separable cuticle; gills adnate, somewhat crowded, thin, watery-cinnamon.

Handsome; the cuticle of the pileus, as well as of the stem, hard.

In old pastures beside stumps. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dun House Park, 1876. Scone, 1877. J. S.
Europe.

499. C. castaneus * Bull. *Fr.Hym. Eur. p.*391. *C. Hbk. No.* 537.

In fir woods. July—Oct.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

500. C. rigens * Fr. *Hym. Eur. p.* 395. *C. Hbk. No.* 539.

In mixed woods. Oct.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

Europe.

501. C. leucopus * Bull. *Fr. Hym. Eur. p.* 395. *C. Hbk. No.* 540.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe. Siberia.

502. C. decipiens * Pers. *Fr.Hym. Eur.p.*396. *C. Hbk. No.* 541.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe. America.

503. C. detonsus * Fr. *Hym. Eur. p.* 397. *B. & Br. No.* 1552.

Soft, moderately fragile; pileus somewhat membranaceous, conico-expanded, somewhat umbonate, smooth, brick-colour, *tan-colour, finely silky,* 1½–2 inches broad, distinguished by its dark tan-*colour, which is deeply struck into the substance of the pileus, becoming pallid yellowish;* stem stuffed, then hollow, attenuated upwards, smooth,

yellowish-pallid; gills adnate, thin, somewhat distant, yellowish, then brick-colour, quite entire.

Among moss in woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875. J. S.
Europe.

504. C. obtusus* Fr. *Hym. Eur. p.* 397. *B. & Br. No.* 1274.

Pileus somewhat membranaceous, conico-campanulate, *striate to the middle*, shining, umbo vanishing, pale yellow (ochraceous pallid, opaque, torn into fibrils); stem hollow, soft, *ventricose*, adpressedly fibrillose, becoming pale; gills adnato-ventricose, somewhat distant, tawny-cinnamon, fringed with white at the edge. *Veil entirely fibrillose, whitish*, from which the pileus when young is here and there hoary-silky, commonly smooth, but torn when dry. Strong-smelling.

In pine woods. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
England. Europe.

505. C. acutus* Pers. *Fr. Hym. Eur. p.* 398. *C. Hbk. No.* 542.

In mixed woods. Sept.—Oct.

East. Tweed —— Tay —— —— ——
West. —— Clyde —— Ross
England. Europe. America.

VI. GOMPHIDIUS Fr.

506. G. glutinosus* Schaeff. *Fr. Hym. Eur. p.* 399. *C. Hbk. No.* 579.

In woods, chiefly pine. July Nov. 1000 ft.

East. Tweed —— Tay Dee Moray ——
West. Solway Clyde —— Ross

Var. **roseus*** Fr. *Hym. Eur. p.* 400. *C. Hbk. No.* 579.

East. —— —— Tay —— Moray ——
West. —— —— —— Ross
England. Europe.

507. G. viscidus* L. *Fr. Hym. Eur. p.* 400. *C. Hbk. No.* 580.
In woods, chiefly pine. July—Oct.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia.

508. G. gracilis Berk. *Fr. Hym. Eur. p.* 400. *C. Hbk. No.* 581.
In fir woods. Aug.—Oct.
East. —— —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

VII. PAXILLUS Fr.

509. P. giganteus* Sow. *Fr. Hym. Eur. p.* 401. *A. maximus. C. Hbk. No.* 95.
In meadows and woods. Sept.—Oct.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

510. P. involutus* Batsch. *Fr. Hym. Eur. p.* 403. *C. Hbk. No.* 547.
In mixed woods. June—Oct.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

511. P. leptopus* Fr. *Hym. Eur. p.* 403. *B. & Br. No.* 1666. *P. filamentosus, No.* 1276.

Pileus fleshy, eccentric, gibbous, at length depressed, at first smooth, then *torn* into villous scales, becoming yellowish-fuscous, *flesh yellow;* stem thin, solid, very short, attenuated downwards; gills decurrent, *simple, straight,* very narrow, very crowded, not anastomosing behind, and not spotted on being touched, becoming yellow, then darker.

On the ground about stumps and chips. Aug.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith. Glen Tilt. Dr. B. White.
Kenmore. J. S.
Europe.

512. P. atro-tomentosus* Batsch. *Fr. Hym. Eur. p.* 403. *C. Hbk. No.* 548.

On pine stumps. Aug.—Nov.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

513. P. panuoides* Fr. *Hym. Eur. p.* 404. *C. Hbk. No.* 549.

On sawdust. Aug.—Oct.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

VIII. HYGROPHORUS Fr.

514. H. eburneus* Bull. *Fr. Hym. Eur. p.* 406. *C. Hbk. No.* 551.

In pastures. Aug.—Oct.

East.	Tweed	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe. America. Siberia.

515. H. pulverulentus* B. & Br. *No.* 1667.

Small; pileus viscous, pulvinate, white, about ⅓ inch across, margin involute, tomentose; stem nearly equal, stuffed, attenuated at the very base, entirely powdered with rosy meal, ¾ inch long, 1–2 lines thick; gills thick, decurrent, obtuse at the edge, whitish.

Allied to *H. eburneus*, but the rose-coloured meal with which the stem is covered separates it from all other species.

Among pine leaves. Nov.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Cram's Hill, 1876. J. S.

516. H. cossus* Sow. *Fr. Hym. Eur. p.* 406. *C. Hbk. No.* 552.

In woods. Sept.—Oct.

East.	Tweed	——	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe.

517. H. olivaceo-albus* Fr. *Hym. Eur. p.* 410. *C. Hbk. No.* 558.

In woods, chiefly pine. Sept.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

518. H. hypothejus* Fr. *Hym. Eur. p.* 410. *C. Hbk. No.* 557.

In pine woods. Sept.—Nov. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe.

519. H. cerasinus Berk. *Fr. Hym. Eur. p.* 410. *C. Hbk. No.* 553.

In woods.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Balnamoon. Rev. M. L. Anderson.
England.

520. H. agathosmus* Fr. *Hym. Eur. p.* 411.

Pileus fleshy, convex, then gibbous-plane, viscous, livid-grey, disc *dotted with pellucid, whitish, crowded papillæ*, margin at first involute, villous, soon naked; stem solid, firm, dry, fibrilloso-striate, *rough above with punctiform scales;* gills decurrent, distant, soft, white.

Distinct from the others from its pleasant odour of anise-seed.

In fir woods. Sept.—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith. Glamis. J. S.
Europe.

521. H. caprinus* Scop. *Fr. Hym. Eur. p.* 412. *B. & Br. No.* 1278.

Pileus fleshy, fragile, conical, then flattened and umbonate, depressed, subrepand, moist, variable in colour, becoming blackish or bluish, streaked, as well as the solid stem, *with fuliginous fibrils;* gills deeply decurrent, very broad, *thick*, very distant, slightly branched, white, then glaucous.

In pastures. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Park, 1874. J. S.
England. Europe. Siberia.

522. H. leporinus Fr. *Hym. Eur. p.* 412. *C. Hbk. No.* 559.

In woods. Oct.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
England. Europe.

523. H. pratensis* Pers. *Fr. Hym. Eur. p.* 413. *C. Hbk. No.* 560.

In pastures. Aug.—Oct.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe.

Var. **cinereus*** Fr. *Hym. Eur. p.* 413. *B. & Br. No.* 1561.

Pileus thinner, and, as well as the gills, white; stem white. Otherwise identical with *H. pratensis*.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White. Killin. J. S.
England. Europe. Ceylon.

524. H. virgineus* Wulf. *Fr. Hym. Eur. p.* 413. *C. Hbk. No.* 561.

In pastures. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe. Arctic.

525. H. niveus* Scop. *Fr. Hym. Eur. p.* 414. *C. Hbk. No.* 562.

In pastures. Sept.

East. —— Forth Tay —— —— ——
West. —— Clyde —— Ross

England. Europe.

526. H. russo-coriaceus B. & Br. *Fr. Hym. Eur. p.* 414. *C. Hbk. No.* 563.

In pastures. Oct.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Penicuik. W. Phillips.
England.

527. H. Clarkii B. & Br. *No.* 1358. *Fr. Hym. Eur. p.* 415.

Fragile; pileus convex, somewhat umbonate, viscous, *livid-cinereous*, margin even; stem hollow, of the same colour; gills adnate, remarkable for breadth, even ½ inch, distant, thick, white.

In pastures. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Abernethy. Perth Fungus Show, 1875.
England.

528. H. metapodius* Fr. *Hym. Eur. p.* 415. *B. & Br. No.* 1359.

Pileus *compact*, convex, then expanded, obtuse, at first viscid, then *silky-squamulose, becoming fuscous*, 1½–3 inches broad, flesh thick, compact, when broken reddish, at length becoming black; stem stuffed, smooth, attenuated downwards, *cinereous, reddish within*, 1–2 inches long, ⅓ inch and more thick; gills somewhat emarginato-decurrent, thick, distant, whitish-grey. Odour of new meal.

From the character of the gills it is somewhat analogous to *Russula nigricans*.

In old pastures. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Park, 1876. J. S.
England. Europe.

529. H. ovinus* Bull. *Fr. Hym. Eur. p.* 415. *C. Hbk. No.* 565.

In pastures. Sept.

East. —— Forth Tay —— —— ——
West. —— —— —— Ross

England. Europe.

530. H. subradiatus* Schum. *Fr. Hym. Eur. p.* 416. *B. & Br. No.* 1670.

Pileus *somewhat membranaceous, radiato-striate*, disc slightly fleshy, somewhat umbonate, variable in colour, somewhat fuscous, whitish, livid, or becoming livid-reddish; stem *fistulose*, equal, smooth, pallid, white at the base, 2 lines thick, often twisted; gills plano-adnate, deeply decurrent with a tooth, ventricose, thin, distant, white.

In old pastures. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Park, 1875. J. S.
Europe.

Var. **lacmus*** Fr. *Hym. Eur. p.* 416. *B. & Br. sub.* 1780.

Pileus plano-depressed, fragile, unequal, lilac, then pallid, disc frequently fibrillose; gills cinereous.
Stem remarkable for its yellow base.

In pastures. Sept.

East. —— —— —— —— —— ——
West. —— —— —— Ross

Loch Maree, 1878. J. S.
England. Europe.

531. H. irrigatus* Pers. *Fr. Hym. Eur. p.* 416. *B. & Br. No.* 1280.

Pileus slightly fleshy, campanulate, then expanded, somewhat umbonate, even, and, as well as the fistulose, *tough*, equal stem, *viscous-slimy*, livid; gills with a decurrent tooth, somewhat distant, whitish.

In Scotch fir wood. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1877. J. S.
England. Europe.

532. H. sciophanus Fr. *Hym. Eur. p.* 417. *B. & Br. No.* 1560.

Somewhat brick-coloured; pileus somewhat fleshy, convex, then depressed, obtuse, slightly viscid, *opaque, striate at the margin;* stem hollow, equal, somewhat flexuose, even; gills thin, decurrent, distant, connected by veins. Spores very pale clay-colour.
Habit and colour of *H. pratensis*, but thin, fragile, juicy.

In mossy places.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
Europe.

533. H. laetus Pers. *Fr. Hym. Eur. p.* 417. *C. Hbk. No.* 567.

In pastures. 1200 ft.

East. Tweed —— Tay Dee —— ——
West. —— —— —— ——

England. Europe.

534. H. ceraceus* Wulf. *Fr. Hym. Eur. p.* 417. *C. Hbk. No.* 568.

In woods and pastures. Sept.—Oct.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Australia. Ceylon.

535. H. coccineus* Schaeff. *Fr. Hym. Eur. p.* 417. *C. Hbk. No.* 569.

In pastures. Aug.—Nov.

East. Tweed Forth Tay Dee —— ——
West. —— Clyde Argyle Ross

England. Europe.

536. H. miniatus* Fr. *Hym. Eur. p.* 418. *C. Hbk. No.* 570.

In open places. July—Oct. 1100 ft.

East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe. India. Ceylon. Arctic.

537. H. turundus* Fr. *Hym. Eur. p.* 418. *B. & Br. No.* 1670.

Pileus thin, convex, then umbilicate, very fragile, at first viscid and golden, *at length squamulose with cinereous-fuscous flocci*, margin incurved, crenate; stem stuffed, then fistulose, rigid, equal, tawny, shining; gills decurrent, distant, white becoming yellowish.

On peat soil. Aug. 2000 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Farragon, Perthshire, 1877. J. S.

Europe.

Var. **mollis** B. & Br. *No.* 1279. *Fr. Hym. Eur. p.* 418.

Golden; pileus nearly plane, at length slightly depressed, clad with soft, short, radiating hairs of the same colour, $\frac{1}{2}$–$\frac{3}{4}$ inch broad; stem equal, stuffed, 1–$1\frac{1}{2}$ inch long, 1–2 lines thick; gills narrow, distant, arcuate, decurrent.

In moist mossy ground. July—Sept.

East. —— —— Tay —— —— ——
West. —— —— —— Ross

England.

538. H. puniceus* Fr. *Hym. Eur. p.* 419. *C. Hbk. No.* 571.

In pastures. July—Nov. 3200 ft.

East. Tweed Forth Tay —— Moray ——
West. Solway Clyde Argyle Ross

England. Europe.

539. H. obrusseus Fr. *Hym. Eur. p.* 419. *C. Hbk. No.* 572.

In woods. Oct.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Mossburnford. A. Jerdon.

Europe. Ceylon.

540. H. conicus* Scop. *Fr. Hym. Eur. p.* 419. *C. Hbk. No.* 573.
In pastures. July—Nov. 1600 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Ceylon.

541. H. calyptraeformis* Berk. *Fr. Hym. Eur. p.* 420. *C. Hbk. No.* 576.
In pastures. Aug.—Oct.
East. Tweed Forth Tay —— —— ——
West. —— —— —— Ross
England.

542. H. chlorophanus* Fr. *Hym. Eur. p.* 420. *C. Hbk. No.* 574.
In grassy places. Aug.—Oct. 1100 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. Ceylon.

543. H. psittacinus* Schaeff. *Fr. Hym. Eur. p.* 420. *C. Hbk. No.* 575.
In pastures. Aug.—Oct. 1000 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America.

544. H. unguinosus* Fr. *Hym. Eur. p.* 421. *C. Hbk. No.* 577.
In pastures. Aug.—Sept.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

545. H. nitratus* Pers. *Fr. Hym. Eur. p.* 421. *H. murinaceus. C. Hbk. No.* 578.
In pastures. Aug.—Sept.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

546. H. glauco-nitens* Fr. *Hym. Eur. p.* 421. *B. & Br. No.* 1671.
Stiff; pileus *streaked with fibrils*, olivaceous-black, or fuliginous, at length very pale; stem equal, shining; *gills becoming glaucous.* Odour that of *H. nitratus*, but not so strong.
In mixed woods. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Pass of Killiecrankie, 1877. J. S.
Europe.

IX. LACTARIUS Fr.

547. L. torminosus* Schaeff. *Fr.Hym.Eur.p.*422. *C.Hbk.No.*582.

In mixed woods. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America. Siberia.

548. L. cilicioides* Fr. *Hym. Eur. p.* 422. *C. Hbk. No.* 583.

In mixed woods. Sept.—Nov.

East. Tweed Forth Tay Dee —— / ——
West. —— Clyde —— ——
England. Europe.

549. L. turpis* Weinm. *Fr. Hym. Eur. p.* 423. *C. Hbk. No.* 584.

In mixed woods. Sept.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Siberia.

550. L. controversus* Pers. *Fr.Hym.Eur.p.*423. *C.Hbk.No.*585.

In mixed woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

551. L. pubescens Fr. *Hym. Eur. p.* 424. *B. & Br. No.* 1282.

Pileus fleshy-tough, *thin*, plano-umbilicate, at length broadly infundibuli form, without zones, *whitish*, disc smooth, shining, fibrillose or pubescent at the margin; stem stuffed, short, *attenuated downwards, flesh-colour, then white;* gills crowded, narrow, slightly flesh-coloured. Milk white; taste very acrid; inodorous.

Among pebbles at margin of loch. Aug.

East. —— —— —— Dee —— ——
West. —— —— —— ——
Loch Kinord, Aberdeenshire, 1870. Rev. M. J. Berkeley.
Europe.

Var. **margine-tomentoso** B.& Br. *No.* 1015. *C.Hbk.No.*586.
Aboyne, 1862. Rev. M. J. Berkeley.

552. L. insulsus* Fr. *Hym. Eur. p.* 424. *C. Hbk. No.* 587.
In mixed woods. Aug.—Sept.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

553. L. zonarius Bull. *Fr. Hym. Eur. p.* 425. *C. Hbk. No.* 588.
In plantations. Aug.—Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Kinnordy. Klotzsch, in Hook. Herb.
England. Europe. America. Siberia.

554. L. blennius* Fr. *Hym. Eur. p.* 425. *C. Hbk. No.* 589.
In mixed woods. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

555. L. hysginus Fr. *Hym. Eur. p.* 426. *C. Hbk. No.* 590.
In woods. Aug.—Oct.
East. —— —— —— —— —— ——
West. —— Clyde —— ——
Inveraray. Miss G. E. Johnstone.
England. Europe.

556. L. trivialis* Fr. *Hym. Eur. p.* 426. *C. Hbk. No.* 591.
In mixed woods. Aug.—Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

557. L. uvidus Fr. *Hym. Eur. p.* 426. *C. Hbk. No.* 593.
In woods. Aug.—Sept.
East. —— —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

558. L. pyrogalus* Bull. *Fr. Hym. Eur. p.* 427. *C. Hbk. No.* 594.
In mixed woods. Aug.—Sept.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

559. L. squalidus Krombh. *Fr. Hym. Eur. p.* 428. *B. & Br. No.* 1556.

Pileus compact, convexo-plane, umbilicate, dry, smooth, without zones, pale lurid; flesh white, sprinkled at the margin with saffron dots; stem firm, solid, equal, smooth, pallid brown; gills adnate, *narrow, becoming yellowish;* milk white, *sweet.*

In moist places.
Scotland; locality unknown, 1875.
Europe.

560. L. chrysorheus* Fr. *Hym. Eur. p.* 428. *C. Hbk. No.* 597.

In mixed woods. Sept.

East.	——	——	Tay	Dee	——	——
West.	——	——	——	——		

England. Europe.

561. L. acris Bolt. *Fr. Hym. Eur. p.* 428. *C. Hbk. No.* 596.

In woods. Aug.—Nov.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Kinnordy. Klotzsch, in Hook. Herb.
England. Europe. America.

562. L. plumbeus Bull. *Fr. Hym. Eur. p.* 429. *C. Hbk. No.* 595.

In woods.

East.	Tweed	Forth	——	——	——	——
West.	——	——	——	——		

England. Europe.

563. L. piperatus* Scop. *Fr. Hym. Eur. p.* 430. *C. Hbk. No.* 598.

In mixed woods. Aug.—Oct.

East.	Tweed	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe. America. Siberia.

564. L. scoticus B. & Br. *No.* 1783.

Pileus depressed-tomentose, then smooth, margin involute, tomentose, flesh firm; stem nearly equal, smooth, somewhat flesh-coloured; gills thin, scarcely branched; milk acrid, persistently white; odour pungent.

Among moss.

East.	——	——	——	Dee	——	——
West.	——	——	——	——		

Aboyne, 1862. Rev. M. J. Berkeley.

565. L. vellereus* Fr. *Hym. Eur. p.* 430. *C. Hbk. No.* 599.

In mixed woods. Sept.—Dec.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America. India.

566. L. exsuccus* Smith. *Jour. Bot.* 1873. *p.* 336. *Grevillea*, ii. *p.* 119. *C. Hbk. No.* 599.

Pileus clothed with adpressed down, fleshy, depressed, with an involute margin; gills decurrent, white, shaded with verdigris, connected by veins, and forked; stem white, very short, clothed with adpressed down; whole plant rigid and brittle, milkless.

Formerly considered a variety of *L. vellereus*. I am doubtful whether the plant can be rightly considered a *Lactarius*.

In woods.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Auchmithie. Rev. M. L. Anderson. Moncreiffe. J. S.
England.

567. L. deliciosus* L. *Fr. Hym. Eur. p.* 431. *C. Hbk. No.* 600.

In woods, chiefly pine. July—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. India.

568. L. pallidus* Pers. *Fr. Hym. Eur. p.* 431. *C. Hbk. No.* 601.

In mixed woods. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— Ross
England. Europe. America.

569. L. quietus* Fr. *Hym. Eur. p.* 431. *C. Hbk. No.* 602.

In mixed woods. Aug.—Nov.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe.

570. L. theiogalus* Bull. *Fr. Hym. Eur. p.* 432. *C. Hbk. No.* 603.

In mixed woods. Sept.—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

571. L. cyathula Fr. *Hym. Eur. p.* 433. *C. Hbk. No.* 604.
In woods. Aug.—Nov.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
Europe.

572. L. rufus* Scop. *Fr. Hym. Eur. p.* 433. *C. Hbk. No.* 605.
In pine woods. June—Nov. 1500 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

573. L. glyciosmus* Fr. *Hym. Eur. p.* 434. *C. Hbk. No.* 606.
In woods, chiefly pine. Sept.—Nov. 1200 ft.
East. —— Forth Tay Dee Moray ——
West. —— —— —— Ross
England. Europe.

574. L. fuliginosus* Fr. *Hym. Eur. p.* 434. *C. Hbk. No.* 608.
In woods. Aug.—Oct.
East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe. America.

575. L. volemus* Fr. *Hym. Eur. p.* 435. *C. Hbk. No.* 609.
In mixed woods. Sept.—Oct.
East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe. America.

576. L. serifluus* D. C. *Fr. Hym. Eur. p.* 436. *C. Hbk. No.* 607.
In mixed woods. Aug.—Nov.
East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— ——
England. Europe.

577. L. mitissimus* Fr. *Hym. Eur. p.* 437. *C. Hbk. No.* 610.
In mixed woods. Aug.—Nov.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

578. L. subdulcis* Bull. *Fr. Hym. Eur. p.* 437. *C. Hbk. No.* 611.

In mixed woods. July—Nov.

East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— Ross
England. Europe. America. India.

579. L. camphoratus* Bull. *Fr. Hym. Eur. p.* 437. *C. Hbk. No.* 612.

In pine woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Cram's Hill. J. S.
England. Europe. America.

580. L. obnubilus* Lasch. *Fr. Hym. Eur. p.* 438. *B. & Br. No.* 1784.

Pileus fleshy, thin, convex, then umbilicate, at first papillate, smooth, *somewhat striate*, without zones, *brown-fuliginous*, scarcely an inch; stem stuffed, then hollow, thin, paler; gills somewhat crowded, becoming yellowish; milk *sweetish*, white. Fragile.

In damp places below alder, and in pasture. Sept.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith. Glamis, 1875. J. S.

581. L. minimus Smith. *Jour. Bot.* 1873, *p.* 205. *Fr. Hym. Eur. p.* 438. *B. & Br. No.* 1557.

Pileus fleshy, pulvinate, *eccentric*, *pallid clay-colour*, margin incurved; stem solid, short, and of the same colour as the gills, which are slightly decurrent, *distant*, arcuate. Spores echinulate. Milk plentiful, mild.

In pastures.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England.

X. RUSSULA Pers.

582. R. nigricans* Bull. *Fr. Hym. Eur. p.* 439. *C. Hbk. No.* 613.

In mixed woods. June—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

583. R. adusta* Pers. *Fr. Hym. Eur. p.* 439. *C. Hbk. No.* 614.

In mixed woods. Aug.—Oct.

East. —— —— Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America.

584. R. semicrema* Fr. *Hym. Eur. p.* 440. *B. & Br. No.* 1674.

Pileus equally fleshy, firm, polished, *white*, *unchangeable*, margin involute, smooth, without striæ; flesh white, unchangeable; stem solid, stout, white, *becoming black*, sometimes short, sometimes 2–3 inches long, nearly 2 inches thick, becoming black when broken; gills decurrent, thin, crowded, white.

In mixed woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill. J. S.
Europe.

585. R. delica* Fr. *Hym. Eur. p.* 440. *C. Hbk. No.* 615.

In mixed woods. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

586. R. furcata* Pers. *Fr. Hym. Eur. p.* 441. *C. Hbk. No.* 616.

In mixed woods. Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Siberia. India.

587. R. sanguinea* Bull. *Fr. Hym. Eur. p.* 442. *C. Hbk. No.* 617.

In Scotch fir wood. Aug.

East. —— —— Tay —— —— ——
West. Solway Clyde —— ——
England. Europe. India.

588. R. rosacea* Pers. *Fr. Hym. Eur. p.* 442. *C. Hbk. No.* 618.

In mixed woods. Sept.

East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

589. R. sardonia* Fr. *Hym. Eur. p.* 442. *C. Hbk. No.* 619.

In mixed woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S. Rannoch. Dr. B. White.
England. Europe.

590. R. depallens* Pers. *Fr. Hym. Eur. p.* 442. *C. Hbk. No.* 620.

In beech wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rescobie. J. S.
England. Europe. America.

591. R. lactea* Pers. *Fr. Hym. Eur. p.* 443. *C. Hbk. No.* 621.

In mixed woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— Ross

Glamis. Loch Maree. J. S.
England. Europe. America.

592. R. virescens* Schaeff. *Fr. Hym. Eur. p.* 443. *C. Hbk. No.* 622.

In mixed woods. Aug.—Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

593. R. lepida* Fr. *Hym. Eur. p.* 444. *C. Hbk. No.* 623.

In mixed woods. Sept.—Oct.

East. —— Forth Tay —— —— ——
West. Solway Clyde —— Ross

England. Europe. America. India.

594. R. rubra* D. C. *Fr. Hym. Eur. p.* 444. *C. Hbk. No.* 624.

In mixed woods. Aug.—Nov.

East. —— Forth Tay Dee —— ——
West. Solway Clyde —— Ross

England. Europe. America. India. Australia.

595. R. xerampelina* Schaeff. *Fr. Hym. Eur. p.* 445. *B. & Br. No.* 1675.

Mild; pileus fleshy, compact, convexo-flattened and depressed, dry, opaque, even and *slightly cracked*, margin straight, even, rosy-purple,

very pale at the disc, becoming whitish-yellow, *flesh compact, becoming whitish-yellow;* stem stout, firm, clavate, even, white, or reddish, at length spongy-soft; gills adnexed, somewhat crowded, forked behind, *white*, then tan-colour. Spores dirty tan-colour.
A very distinct species.

In Scotch fir wood. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Warren Wood, 1876. J. S.
England. Europe.

596. R. vesca* Fr. *Hym. Eur. p.* 446. *C. Hbk. No.* 625.

In mixed woods. Sept.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

597. R. cyanoxantha* Schaeff. *Fr. Hym. Eur. p.* 446. *C. Hbk. No.* 626.

In mixed woods. Aug.—Oct.
East. —— Forth Tay —— Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

598. R. heterophylla* Fr. *Hym. Eur. p.* 446. *C. Hbk. No.* 627.

In mixed woods. July—Oct.
East. Tweed Forth Tay Dee —— ——
West. Solway Clyde —— Ross
England. Europe.

599. R. consobrina* Fr. *Hym. Eur. p.* 447. *B. & Br. No.* 1676.

Very acrid; pileus fleshy, somewhat fragile, at first campanulate, expanded or depressed, umber, olivaceous-fuscous or grey, *flesh white, cinereous* beneath the (moist) *thick, viscous pellicle*, margin membranaceous, straight, even; stem spongy-stuffed, firm, *white, becoming cinereous;* gills attached, crowded, white, *most of them dimidiate and forked.*

In mixed woods. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den, 1876. J. S.
Europe.

600. R. foetens* Pers. *Hym. Eur. p.* 447. *C. Hbk. No.* 628.

In mixed woods. July—Sept.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe. America.

601. R. Queletii Fr. *Hym. Eur. p.* 448.

Acrid; pileus compact, campanulato-convex, then plane, *even*, viscous, *violaceous-black* or fuscous, margin slightly striate, *purplish-lilac*, flesh firm, white, red-purple under the pellicle; stem spongy, *mealy*, violet-purple; gills attenuated, unequal or forked, *distilling moisture*, white.

In woods. Oct.

East.	——	Forth	——	——	——	——
West.	——	——	——	——		

Edinburgh Fungus Show, 1878.

England. Europe.

602. R. emetica* Harz. *Fr. Hym. Eur. p.* 448. *C. Hbk. No.* 629.

In woods and open ground. Aug.—Nov. 3600 ft.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	Argyle	Ross		

England. Europe. America. India.

603. R. pectinata* Bull. *Fr. Hym. Eur. p.* 449. *B. & Br. No.* 1564.

Acrid; pileus fleshy, *rigid*, flattened and depressed, opaque, discoid, *margin pectinato-sulcate*, at first like a smooth sugared cake, at length dry, deformed, the darker disc becoming fuscous, *flesh yellowish* beneath the adnate viscid pellicle, 3 inches broad; stem spongy-stuffed, short, *rigid*, *striate*, *white*; gills *attenuato-free*, dilated from the stem towards the margin, crowded, *equal*, simple, white, not distilling moisture, and not changeable on being touched. Odour weak, but *nauseous*, approaching the character of *R. foetens*.

In mixed woods. Aug.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Hunter's Hill, 1874. J. S.

Europe.

604. R. ochroleuca* Pers. *Fr. Hym. Eur. p.* 449. *C. Hbk. No.* 630.

In mixed woods. Aug.—Nov.

East.	——	Forth	Tay	Dee	——	——
West.	——	Clyde	——	Ross		

England. Europe. America.

605. R. fragilis * Pers. *Fr. Hym. Eur. p.* 450. *C. Hbk. No.* 631.
In mixed woods. Aug.—Oct.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia. Australia.

606. R. integra * L. *Fr. Hym. Eur. p.* 450. *C. Hbk. No.* 632.
In woods, chiefly pine. Aug.—Nov.
East. Tweed —— Tay —— —— ——
West. —— —— —— Ross
England. Europe. Siberia. Arctic.

607. R. decolorans. *Fr. Hym. Eur. p.* 451. *C. Hbk. No.* 633.
In woods. Aug.—Sept.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop, &c. Rev. J. Keith.
England. Europe.

608. R. aurata With. *Fr. Hym. Eur. p.* 452. *C. Hbk. No.* 634.
In woods. Aug.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

609. R. nitida Pers. *Fr. Hym. Eur. p.* 452. *C. Hbk. No.* 636.
In woods. Aug.—Sept.
East. —— Forth —— —— Moray ——
West. —— Clyde —— ——
England. Europe. America.

610. R. alutacea * Fr. *Hym. Eur. p.* 453. *C. Hbk. No.* 637.
In mixed woods. June—Nov.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. India.

611. R. lutea Huds. *Fr. Hym. Eur. p.* 454. *C. Hbk. No.* 638.
In woods. July—Oct.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

612. **R. vitellina** * Pers. *Fr. Hym. Eur. p.* 454. *C. Hbk. No.* 639.
In mixed woods. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Pass of Killiecrankie, 1877. J. S.
England. Europe.

613. **R. chamaeleontina** * Fr. *Hym. Eur. p.* 455. *C. Hbk. No.* 640.
In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

XI. CANTHARELLUS Fr.

614. **C. cibarius** * Fr. *Hym. Eur. p.* 455. *C. Hbk. No.* 641.
In woods, especially under beech. July—Dec. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Australia.

615. **C. aurantiacus** * Wulf. *Fr. Hym. Eur. p.* 455. *C. Hbk. No.* 642.
In woods, especially pine. Aug.—Nov. 1700 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Australia.

616. **C. umbonatus** * Pers. *Fr. Hym. Eur. p.* 457. *C. Hbk. No.* 644.
In woods. April—Aug.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

617. **C. tubaeformis** * Fr. *Hym. Eur. p.* 457. *C. Hbk. No.* 645.
In woods. Aug.—Oct.
East. —— —— Tay Dee —— ——
West. Solway Clyde —— Ross
England. Europe. America.

618. C. infundibuliformis * Scop. *Fr. Hym. Eur. p.* 458. *C. Hbk. No.* 646.

In woods. July—Oct.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. India.

619. C. Stevensoni.* B. & Br. *No.* 1422.

Pileus orbicular, umbilicate, pallid, smooth, margin inflexed, about 2 lines broad; stem cylindrical, delicately pulverulent, white, at length darker, $\frac{1}{4}$ inch long, $\frac{1}{2}$ line thick, with a little white mycelium at the base; gills decurrent pallid, fuscous in front.

Very near to *C. cupulatus;* but that is very strongly umbonate when young, and the umbo is always visible at the bottom of the umbilicus; the habitat, moreover, is different.

On very rotten wood among moss. March—April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

620. C. muscigenus * Bull. *Fr. Hym. Eur. p.* 460. *C. Hbk. No.* 649.

On moss. Jan.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Arctic.

621. C. retirugis Bull. *Fr. Hym. Eur. p.* 460. *C. Hbk. No.* 651.

On moss. May.

East. —— —— —— Moray ——
West. —— Clyde —— ——

England. Europe.

622. C. lobatus Pers. *Fr. Hym. Eur. p.* 461. *C. Hbk. No.* 650.

On mosses in bogs. Autumn. 2000 ft.

East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— ——

England. Europe.

XII. ARRHENIA Fr.

XIII. NYCTALIS Fr.

623. N. asterophora * Fr. *Hym. Eur. p.* 463. *C. Hbk. No.* 652.

On dead *Russula nigricans.* Sept.—Nov.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— Ross

England. Europe. America. Cuba.

624. N. parasitica * Bull. *Fr. Hym. Eur. p.* 464. *C. Hbk. No.* 653.
On dead *Russulæ*. Aug.—Nov.

East.	——	Forth	Tay	——	——	——
West.	——	Clyde	Argyle	Ross		

England. Europe.

XIV. MARASMIUS Fr.

625. M. urens * Bull. *Hym. Eur. p.* 465. *C. Hbk. No.* 654.
In mixed woods. June—Sept.

East.	——	——	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe.

626. M. peronatus * Bolt. *Fr. Hym. Eur. p.* 465. *C. Hbk. No.* 655.
In mixed woods. July—Nov.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe.

627. M. porreus * Pers. *Fr. Hym. Eur. p.* 466. *C. Hbk. No.* 656.
In woods, especially among oak leaves. Sept.—Nov.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

628. M. oreades * Bolt. *Fr. Hym. Eur. p.* 467. *C. Hbk. No.* 657.
In lawns and pastures. May—Oct. 1200 ft.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	Solway	Clyde	Argyle	Ross		

England. Europe. America.

629. M. scorteus * Fr. *Hym. Eur. p.* 468. *B. & Br. No.* 1677.
Mild; pileus slightly fleshy, pliant, convex, then flattened, *obtuse*, without striæ, at length slightly wrinkled, becoming pale, often whitish, 5 lines broad; *stem obsoletely fistulose, equal*, tough, becoming whitish-fuscous, *delicately pruinose at the apex*, not floccose, twisted and becoming fuscous in drying, 1 inch long, scarcely 1 line thick; gills rounded-free, broad, distant, white.
Habit of a small *M. oreades*.
In grass among trees. Aug.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Moncreiffe, 1877. Dr. B. White.
Europe.

630. M. fusco-purpureus* Pers. *Fr. Hym. Eur. p.* 469. *C. Hbk. No.* 658.

In woods on sticks. Aug.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

631. M. Wynnei B. & Br. *Fr. Hym. Eur. p.* 470. *C. Hbk. No.* 659.

On twigs.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Fern. Rev. J. Fergusson.
England. Ceylon.

632. M. torquescens* Quel. *Fr. Hym. Eur. p.* 471. *B. & Br. No.* 1678.

Pileus membranaceous, thin, convexo-plane, *rugoso-striate*, pallid, disc tawny; stem somewhat filiform, *delicately velvety*, brown, *smooth* at the apex, whitish, twisted in drying, sulcate; gills free, *thin*, ventricose, finely serrulated, distant, white or reddish.

In the very young plant, when the pileus is conical, there is a slight indication of a veil.

Among oak leaves.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1877. J. S.
Europe.

633. M. foetidus Sow. *Fr. Hym. Eur. p.* 473. *C. Hbk. No.* 668.

On decayed wood. Aug.—Nov.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Foxhall, Edinburgh. Greville.
England. Europe.

634. M. amadelphus* Bull. *Fr. Hym. Eur. p.* 474. *C. Hbk. No.* 669.

On dead branches. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Killin, 1876. J. S.
England. Europe.

635. M. ramealis * Bull. *Fr. Hym. Eur. p.* 474. *C. Hbk. No.* 670.
On dead twigs. Sept.—Nov.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America. Cape Verde.

636. M. alliaceus * Jacq. *Hym. Eur. p.* 475. *C. Hbk. No.* 671.
Among leaves and on rotten wood. Aug.—Oct.
East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

637. M. caulicinalis With. *Hym. Eur. p.* 476. *C. Hbk. No.* 672.
On the ground among leaves.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Fern. Rev. J. Fergusson.
England. Europe.

638. M. rotula * Scop. *Fr. Hym. Eur. p.* 477. *C. Hbk. No.* 673.
On fallen twigs. July—Nov. 1000 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America. India. Australia.
Cuba.

639. M. graminum * B. & Br. *Fr. Hym. Eur. p.* 477. *C. Hbk. No.* 674.
On grass. July—Sept.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

640. M. androsaceus * L. *Fr. Hym. Eur. p.* 477. *C. Hbk. No.* 675.
On decaying leaves, &c. April—Nov. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America.

641. M. perforans * Fr. *Hym. Eur. p.* 478. *C. Hbk. No.* 676.
On fir leaves. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

642. M. insititius Fr. *Hym. Eur. p.* 478. *C. Hbk. No.* 677.

On decayed leaves.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe. America.

643. M. Hudsoni Fr. *Hym. Eur. p.* 478. *C. Hbk. No.* 678.

On fallen holly leaves. June.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sluie. Rev. J. Keith.
England. Europe.

644. M. saccharinus* Batsch. *Fr. Hym. Eur. p.* 479. *C. Hbk. No.* 680.

On sticks. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Killin, 1876. J. S.
England. Europe.

645. M. epiphyllus* Pers. *Fr. Hym. Eur. p.*479. *C. Hbk. No.*679.

On dead leaves. Sept.—Oct.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Siberia.

XV. LENTINUS Fr.

646. L. lepideus* Fr. *Hym. Eur. p.* 481. *C. Hbk. No.* 684.

On pine. July.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America. Siberia.

647. L. leontopodius Schutz. *Fr. Hym. Eur. p.* 482.

Pileus, fleshy-coriaceous, tough, irregular, *delicately tomentose*, tan-clay-colour, cinnamon-colour, disc depressed, the deflexed margin slightly lobed; stem thick, woody, unpolished, pulverulent, pale

chestnut, *blackish downwards;* gills decurrent, connected by veins, wrinkled at the sides, serrated at the edge. Large, handsome; taste pleasant.

On decayed willow.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.
Europe.

648. L. pulverulentus * Scop. *Fr. Hym. Eur. p.* 483. *B. & Br. No.* 1567.

Tufted; pileus fleshy-pliant, at first infundibuliform, then lateral flabelliform, convex, *yellow*, fuliginous, floccoso-*pulverulent*, with little umber particles, 2 inches broad; *stem* also *mealy with white dust*, stout, elongated, equal, rigid, at length smooth, 3 inches long; gills thick, pallid, deeply decurrent, their edge crenulate, but not torn.

On dead trunks. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. 1875. J. S.
Europe.

649. L. adhaerens A. & S. *Fr. Hym. Eur. p.* 483. *C. Hbk. No.* 685.

In pine woods.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Balnamoon. Rev. M. L. Anderson.
England. Europe.

Var. **resinaceus** Trog. *Fr. Hym. Eur. p.* 483. *B. & Br. No.* 1283.

Pileus somewhat fleshy, pliant, eccentric, *villous-somewhat gummy, ochraceous-cinnamon*, stem unequal, tomentose; gills crowded, serrate, white.

On trunks.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. M. Terry.
Europe.

650. L. cochleatus * Pers. *Fr. Hym. Eur. p.* 484. *C. Hbk. No.* 686.

On stumps. Aug.—Oct.

East. Tweed —— Tay —— Moray ——
West. —— Clyde Argyle ——

England. Europe. America.

651. L. scoticus* B. & Br. *No.* 1423. *Fr. Hym. Eur. p.* 485.

Pileus *umbilicate*, sometimes infundibuliform, at length flattened, *pallid*, at length brownish, hygrophanous; extremely variable in form, either quite stemless and *reniform*, or variously stipitate, lobed at the margin and sinuate, or plicate, ½–1½ inch broad; stem when present *cylindrical*, darker, *pulverulent*, *springing from a brown, fibrillose mycelium*, varying from 2 lines to as many inches; gills rather distant, strongly toothed, decurrent when the stem is developed. Solitary or cæspitose; sometimes 2 pilei are joined. Inodorous, or, at any rate, without any odour of aniseed.

The nearest ally to this curious species is *L. omphalodes*.

On decayed *Ulex*, birch, and spruce. Nov.—Jan.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson. Glamis, Hunter's Hill, 1873. J. S.

XVI. PANUS Fr.

652 P. conchatus Fr. *Hym. Eur. p.* 488. *C. Hbk. No.* 691.

On trunks. June—July

East. Tweed —— —— —— Moray ——
West. —— —— Argyle ——

England. Europe. America.

653. P. stipticus* Bull. *Fr. Hym. Eur. p.* 489. *C. Hbk. No.*692.

On stumps. Sept.—Feb.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America. New Zealand.

654. P. farinaceus* Schum. *Fr. Hym. Eur. p.* 490.

Pileus somewhat coriaceous, flexuose, cinnamon-umber, *the cuticle disappearing in a whitish-bluish-grey scurf;* stem lateral, short, of the same colour; gills definitely free, *distinct*, paler.

On fir pole. Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hayston Hill, 1873. J. S.
Europe. Siberia.

655. P. patellaris Fr. *Hym. Eur. p.* 490. *B. & Br. No.* 1680.

Resupinate; coriaceous, *flat cup-shaped*, orbicular, externally pallid, furfuraco-villose, adnate by a vertex which is scarcely at all extended, margin involute; gills concurrent, obscurely *ochraceous*.

On cherry. March.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres, 1877. Rev. J. Keith.
Europe.

656. P. Stevensoni * B. & Br. *No.* 1796.

Pileus spathulate, olivaceous-yellow; stem dilated upwards, convex, golden, slightly hispid; gills narrow, entire; flesh greenish-yellow.

On oak. Sept.—Oct.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1877. J. S. Penicuik, 1878. C. B. Plowright.

XVII. XEROTUS Fr.

657. X. degener * Fr. *Hym. Eur. p.* 491. *C. Hbk. No.* 693.

On peaty soil among short grass. Jan.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren, 1877. J. S.
England. Europe.

This extremely rare species has hitherto been recorded as British, on the authority of Sowerby. My specimens, in the opinion of Mr. Berkeley, were nearest *Schaeff. t.* 243.

XVIII. TROGIA Fr.

658. T. crispa * Pers. *Fr. Hym. Eur. p.* 492. *C. Hbk. No.* 694.

On birch logs. Oct.—Nov.

East. Tweed —— Tay —— Moray ——
West. —— Clyde —— ——

England. Europe. America.

XIX. SCHIZOPHYLLUM Fr.

659. S. commune Fr. *Hym. Eur. p.* 492. *C. Hbk. No.* 695.

On logs.

East. —— Forth —— —— —— ——
West. —— Clyde —— ——

England. Europe. America. Australia. Ceylon. St. Helena. St. Thomas. Philippine Islands. Tongatabu. Arctic.

In the "*Scottish Cryptogamic Flora*" Greville records it as having been gathered on Dundas Hill, near Edinburgh. I have examined his specimen in the Edinburgh Herbarium marked "Dundas Hill." From the locality, and from Greville's well-known accuracy, there can be no doubt that it was indigenous. The specimens occurring at Glasgow, which I also examined, were on foreign logs. In *B. & Br.*, sub. 1796, it is noted, "Undoubtedly indigenous specimens have occurred both in Buckinghamshire and Kent in 1878."

XX. LENZITES Fr.

660. L. betulina L. *Fr. Hym. Eur. p.* 493. *C. Hbk. No.* 696.

On birch. Jan.—Dec.
Duglesham. Klotzsch, Edinburgh Herbarium.
England. Europe. America.

661. L. saepiaria* Schaeff. *Fr. Hym. Eur. p.* 494. *C. Hbk. No.* 698.

On old pine logs. Jan.—Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe. America. Siberia.

662. L. abietina Fr. *Hym. Eur. p.* 495. *C. Hbk. No.* 699.

On deals. Jan.—Dec.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Glasgow. Klotzsch, in Hook. Herb.
Europe. America. Australia.

Order II.—POLYPOREI.

XXI. BOLETUS Fr.

663. B. luteus * L. *Fr. Hym. Eur. p.* 497. *C. Hbk. No.* 700.

In pine woods. July—Nov. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Siberia.

664. B. elegans * Schum. *Fr. Hym. Eur. p.* 497. *C. Hbk. No.* 701.

In woods, especially larch. June—Oct. 1300 ft.

East. Tweed —— Tay Dee —— ——
West. —— Clyde —— ——
England. Europe. America.

665. B. flavus * With. *Fr. Hym. Eur. p.* 497. *C. Hbk. No.* 702.

In mixed woods. June—Oct.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe.

666. B. flavidus Fr. *Hym. Eur. p.* 498.

Thin; pileus gibbous, then plane, viscous, becoming livid-yellowish, flesh pallid; stem thin, nearly equal, pallid, *sprinkled above the wholly viscous ring with evanescent glandules;* tubes decurrent, *pores large,* angular, *compound,* dirty yellow.

Very distinct from its allies, more slender, differing from all of them in its wholly glutinous veil.

In pine woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe. America.

667. B. granulatus * L. *Fr. Hym. Eur. p.* 498. *C. Hbk. No.* 704.

In mixed woods. July—Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill. J. S.
England. Europe. America. Siberia.

668. **B. bovinus*** L. *Fr. Hym. Eur. p.* 499. *C. Hbk. No.* 705.
In woods, chiefly pine. Sept.—Oct.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America.

669. **B. badius*** *Fr. Hym. Eur. p.* 499. *C. Hbk. No.* 706.
In woods, chiefly pine. Aug.—Oct.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. Siberia.

670. **B. piperatus*** Bull. *Fr. Hym. Eur. p.* 500. *C. Hbk. No.* 708.
In mixed woods. Aug.—Nov. 1100 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

671. **B. variegatus*** Swartz. *Fr. Hym. Eur. p.* 501. *C. Hbk. No.* 711.
In mixed woods. Sept.—Oct.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America.

672. **B. sulphureus** Fr. *Hym. Eur. p.* 502. *B. & Br. No.* 1424.
Pileus compact, convex, then plane, *silky-tomentose with innate flocci*, sulphur-coloured, flesh yellow, when broken becoming more or less blue, but golden on being exposed to the air, everywhere reddish under the tubes; stem also *sulphur-coloured*, firm, ventricose, *even*, smooth, at length becoming dirty ferruginous, 1–2 inches long, 1 inch thick; tubes adnato-decurrent, short, 1–2 lines long, adhering more closely than usual, changing colour when touched, at length spotted with ferruginous stains, pores minute, compound, of the same colour, at length becoming greenish; spores yellow, then olivaceous.
From a fleecy, golden, wide-spreading mycelium it springs in dense clusters after the manner of *Ag. spectabilis*; pilei repand and growing together.
Among sawdust. Sept.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Loch-an-Eilan, Rothiemurchus. Rev. J. Keith.
Europe.

673. **B. chrysenteron*** Bull. *Fr. Hym. Eur. p.* 502. *C. Hbk. No.* 713.
In woods and open ground. July—Nov. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

674. B. subtomentosus * L. *Fr. Hym.Eur.p.*503. *C.Hbk.No.*714.

In mixed woods. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——

England. Europe. America. Australia.

675. B. spadiceus * Schaeff. *Fr.Hym.Eur.p.*503. *B.&Br.No.*1797.

Pileus pulvinato-expanded, dry, tomentose, *bay-brown*, opaque, then widely cracked, decidedly compact; flesh white, unchangeable, reddish-fuscous upwards; stem firm, clavate, *even*, *flocculoso-furfuraceous*, becoming yellowish-fuscous, internally becoming yellowish-white; tubes adnate, yellow, pores minute, somewhat rounded.

In mixed woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875, J. S.
Europe.

676. B. rubinus * Smith. *Fr. Hym. Eur. p.* 504. *C. Hbk. No.* 709.

In mixed woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den. J. S.
England.

677. B. variecolor * B.&Br. *Fr. Hym. Eur.p.*506. *C.Hbk.No.*715.

In mixed woods. Aug.—Sept.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England.

678. B. calopus * Fr. *Hym. Eur. p.* 506. *C. Hbk. No.* 716.

In mixed woods. July—Sept.

East. —— —— Tay —— Moray ——
West. —— Clyde Argyle ——

England. Europe. America.

679. B. olivaceus * Schaeff. *Fr. Hym.Eur.p.*506. *C. Hbk.No.*717.

Under beech. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

680. B. pachypus * Fr. *Hym. Eur. p.* 506. *C. Hbk. No.* 718.
In woods, chiefly pine. Sept.—Oct.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

681. B. edulis * Bull. *Fr. Hym. Eur. p.* 508. *C. Hbk. No.* 719.
In mixed woods and meadows. July—Nov. 1700 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America.

682. B. impolitus * Fr. *Hym. Eur. p.* 509. *C. Hbk. No.* 721.
In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S. Menmuir. Rev. M. L. Anderson.
England. Europe.

683. B. satanas * Lenz. *Fr. Hym. Eur. p.* 510. *C. Hbk. No.* 723.
In mixed woods. Aug.—Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

684. B. luridus * Schaeff. *Fr. Hym. Eur. p.* 511. *C. Hbk. No.* 724.
In mixed woods. July—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America.

685. B. erythropus * Krombh. *Fr. Hym. Eur. p.* 511. *C. Hbk. No.* 725.
In woods and shrubbery. July—Aug.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

686. B. laricinus * Berk. *Fr. Hym. Eur. p.* 513. *C. Hbk. No.* 703.
In larch woods. Aug.—Sept. 1000 ft.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— Ross
England.

687. B. versipellis * Fr. *Hym. Eur. p.* 515. *C. Hbk. No.* 728.

In woods and heath. Aug.—Oct. 1280 ft.

East. —— —— Tay —— —— ——
West. —— Clyde —— Ross
England. Europe. America.

688. B. scaber * Fr. *Hym. Eur. p.* 515. *C. Hbk. No.* 729.

In mixed woods and heath. July—Nov. 3000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Siberia.

689. B. cyanescens* Bull. *Fr. Hym. Eur. p.* 517. *C. Hbk. No.* 732.

In mixed woods. Aug.—Sept.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——
Glamis Den, 1874. J. S. Rannoch. Glen Lochay. Tighnabruaich. Dr. B. White.
England. Europe. America.

XXII. FISTULINA Bull.

690. F. hepatica * Huds. *Fr. Hym. Eur. p.* 522. *C. Hbk. No.* 841.

On living oak. Aug.—Oct.

East. —— Forth Tay —— Moray ——
West. Solway Clyde Argyle ——
England. Europe. America.

XXIII. POLYPORUS Fr.

1. MESOPUS.

691. P. leucomelas Pers. *Fr. Hym. Eur. p.* 524. *B. & Br. No.* 1682.

Pileus fleshy, somewhat fragile, deformed, silky-squamulose, *black-fuliginous*, dilated to 2-3 inches, flesh white, reddish when broken; stem stout, unequal, *somewhat tomentose*, of the same colour, some-

times short, tuberous, 1 inch long, sometimes 2–3 inches long, equal, internally becoming blackish; pores rather large, unequal, *cinereous*, whitish, in dried specimens becoming blackish.

In fir wood. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.
Europe. America.

692. P. lentus * Berk. *Fr. Hym. Eur. p.* 526. *C. Hbk. No.* 738.
On *Ulex*, &c. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. J. S.
England. America.

693. P. brumalis * Pers. *Fr. Hym. Eur. p.* 526. *C. Hbk. No.* 735.
On dead branches. Oct.—March.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America. Cape.

P. floccipes * Rostk. *Fr. Hym. Eur. p.* 526. *B. & Br. No.* 1427.
Not differing essentially from *P. brumalis*.
Glamis, Hunter's Hill, 1874. J. S.

694. P. leptocephalus Jacq. *Fr. Hym. Eur. p.* 528. *C. Hbk. No.* 737.
On old wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Den of Fullerton, Forfarshire. Rev. J. Fergusson.
England. Europe. America.

695. P. Schweinitzii * Fr. *Hym. Eur. p.* 529. *C. Hbk. No.* 739.
In pine woods, about roots. July—Oct.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe. America. India.

696. P. rufescens * Fr. *Hym. Eur. p.* 529. *C. Hbk. No.* 740.
On dead pine. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. J. S.
England. Europe. America. India. Japan.

697. P. perennis* L. *Fr. Hym. Eur. p.* 531. *C. Hbk. No.* 741.

On the ground and on stumps. July—Jan. 2200 ft.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde —— Ross

England. Europe. America. Siberia. Penang.

2. PLEUROPUS.

698. P. squamosus* Huds. *Fr. Hym. Eur. p.* 532. *C. Hbk. No.* 742.

On trunks, stumps, &c. May—Nov. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——

England. Europe. India.

699. P. melanopus Fr. *Hym. Eur. p.* 534. *B. & Br. No.* 1286.

Pileus fleshy-flexible, plane, then infundibuliform, white, becoming yellowish-fuscous, *at first delicately floccolose; stem* eccentric, *somewhat velvety*, incurved, *thickened downwards*, black; pores decurrent, short, minute, obtuse, unequal, white. Flesh thick, white.

On dead wood and roots. Aug.—Sept.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

Europe. America.

700. P. picipes Fr. *Hym. Eur. p.* 534. *C. Hbk. No.* 744.

On trunks, especially willow. July—Dec.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. India. Ceylon. Cuba. Australia.

701. P. varius* Fr. *Hym. Eur. p.* 535. *C. Hbk. No.* 745.

On trunks and stumps, especially ash. Aug.—Oct.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Siberia. Australia. Java.

702. P. elegans* Bull. *Fr. Hym. Eur. p.* 535. *C. Hbk. No.* 746.

On decaying birch. July—Nov.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America. Tasmania. Cuba. Admiralty Islands.

Var. **nummularius** * Rostk. *Fr. Hym. Eur. p.* 536. *C. Hbk. No.* 746.
On trunks. Dec.
Glamis. J. S. Altyre, &c. Rev. J. Keith.
Europe.

703. P. lucidus Leys. *Fr. Hym. Eur. p.* 537. *C. Hbk. No.* 748.
On stumps of old trees. Summer.
East. —— —— —— —— —— ——
West. —— ' Clyde —— ——
Bothwell Woods. Greville, Scot. Crypt. Fl.
England. Europe. America.

3. MERISMA.

704. P. intybaceus * Fr. *Hym. Eur. p.* 538. *C. Hbk. No.* 749.
At roots of trees, especially oak. Sept.
East. —— Forth Tay —— —— ——
West. —— Clyde —— ——
England. Europe. India.

705. P. cristatus Pers. *Fr. Hym. Eur. p.* 539. *C. Hbk. No.* 750.
In woods.
East. —— —— —— —— —— ——
West. —— Clyde —— ——
Inveraray. Miss G. E. Johnstone.
England. Europe. America.

706. P. giganteus * Pers. *Fr. Hym. Eur. p.* 540. *C. Hbk. No.* 751.
On stumps. Aug.—Oct.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America.

707. P. sulphureus * Bull. *Fr. Hym. Eur. p.* 542. *C. Hbk. No.* 752.
On living trees and stumps. July.—Sept.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——
England. Europe. America. India. Ceylon.
Tasmania. Cuba.

708. P. spongia Fr. *Hym. Eur. p.* 542. *P. Herbergii* Rostk. *B. & Br. No.* 1805.

Cæspitose in many tufts; pilei *spongy-soft*, very numerous, *dimidiate*, connate in a large tuft, flattened, *rugged-rugose* and rough (as if) with scales, brown-ferruginous (when dry tawny-ferruginous); pores short, medium sized, entire, sulphur-colour, becoming fuscous.

On dead wood. Sept.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh Fungus Show, 1878.
Europe.

709. P. alligatus Fr. *Hym. Eur. p.* 543. *C. Hbk. No.* 753.

At roots of trees.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Inveraray. Miss G. E. Johnstone.
England. Europe.

4. APUS.

710. P. epileucus * Fr. *Hym. Eur. p.* 545. *C. Hbk. No.* 756.

On stumps, chiefly fir and elm. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe. America.

711. P. alutaceus * Fr. *Hym. Eur. p.* 545. *B. & Br. No.* 1799.

Pileus fleshy, at length tough, extended in kidney-shape, *somewhat velvety*, tan-coloured, obsoletely zoned within, *margin acute, even*; pores small, thin, nearly round, whitish-tan-colour.

Somewhat imbricated, sometimes convex, sometimes flattened, frequently hairy and wrinkled, flat beneath.

On decayed pine stump. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Cram's Hill, 1876. J. S.
Europe. America.

712. P. chioneus * Fr. *Hym. Eur. p.* 546. *C. Hbk. No.* 757.

On stumps and dead wood. July—Sept.

East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe. America. Siberia.

713. P. cerebrinus * B. & Br. *No.* 1800.

Snow white, pulvinate, delicately tomentose, becoming smooth; margin crenate; pores rounded, entire, dissepiments, thick, obtuse. About 1 inch across.

Looks like a portion of white brain.

On fir. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood. 1877. J. S.

714. P. lacteus * Fr. *Hym. Eur. p.* 546.

White; pileus fleshy-fibrous, fragile, triangular, *pubescent*, externally and internally without zones, margin inflexed, acute, elongated transversely, very much sloped downwards, and gibbous behind, at length becoming smooth and unequal; pores *thin, acute*, toothed, *at length labyrinthiform*, torn.

On dead laburnum and birch. Sept.—Nov.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Ceylon.

715. P. fragilis * Fr. *Hym. Eur. p.* 546. *C. Hbk. No.* 758.

On dead pine. Sept.—Nov.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

716. P. caesius * Schrad. *Fr. Hym. Eur. p.* 547. *C. Hbk. No.* 759.

On fir branches. Sept.—Nov.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde —— ——

England. Europe. America.

717. P. trabeus * Fr. *Hym. Eur. p.* 547. *B. & Br. No.* 1428.

White; pileus fleshy-fibrous, then firm, effuso-reflexed, transversely elongated, without zones, pallid; pores short, minute, somewhat rounded or elongated, toothed, white.

On dead pine. Feb.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Den of Dun, 1874. J. S. Menmuir. Rev. M. L. Anderson.

Europe. Siberia.

718. P. destructor * Schrad. *Fr. Hym.Eur.p.*547. *C.Hbk.No.*760.
On fir stumps. July—Dec.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia.

719. P. nidulans * Fr. *Hym. Eur. p.* 548. *C. Hbk. No.* 761.
On dead wood. Sept.—Nov.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

720. P. fumosus * Pers. *Fr. Hym. Eur. p.* 549. *P. Hbk. No.* 763.
On old stumps. Oct.—Dec.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Siberia. Cuba.

721. P. adustus * Willd. *Fr. Hym. Eur. p.* 549. *C. Hbk. No.* 764.
On old stumps. Sept.—Jan.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. India. New Zealand.
Japan. Juan Fernandez. Tahiti. Sandwich Islands.

722. P. crispus * Pers. *Fr. Hym. Eur. p.* 550. *C. Hbk. No.* 765.
On old stumps. Dec.
East. Tweed —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America. India.

723. P. amorphus * Fr. *Hym. Eur. p.* 550. *C. Hbk. No.* 767.
On fir stumps. Nov.—Jan.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

724. P. adiposus * B. & Br. *Fr. Hym. Eur. p.* 550. *C. Hbk. No.*766.
On the ground in mixed woods. Dec.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

725. P. Keithii B. & Br. *No.* 1430.

Shell-shaped, stemless, decurrent behind; pileus bright red-brown, rough, with rigid, tooth-shaped processes, about ½ inch across; hymenium pallid; dissepiments lacerated.

On fallen sticks.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Dunphail. Rev. J. Keith.

726. P. hispidus * Bull. *Fr. Hym. Eur. p.* 551. *C. Hbk. No.* 768.

On living ash. July—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——

England. Europe. America. Australia.

727. P. spumeus * Sow. *Fr. Hym. Eur. p.* 552. *C. Hbk. No.* 770.

On stumps. July.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

728. P. borealis Fr. *Hym. Eur. p.* 552. *B. & Br. No.* 1429.

White, then yellowish; pileus spongy, *then corky*, compact, somewhat pulvinate, *hairy, internally composed of parallel fibres*, margin spreading; pores adnate, unequal, sinuato-flexuose, and torn, white.

On stumps.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Balnamoon. Rev. M. L. Anderson. Strachan. J. Sim.
England. Europe. America. Siberia. New Zealand.

729. P. pubescens Schum. *Fr. Hym. Eur. p.* 553. *B. & Br. No.* 1803.

Pileus fleshy, tough, then corky, soft, convex, *somewhat zoned, pubescent*, externally and internally white, margin acute, *at length becoming yellow;* pores short, minute, roundish, plane.

On willow and broom.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Strachan. J. Sim. Menmuir. Rev. M. L. Anderson.
Europe. America.

730. P. betulinus * Bull. *Fr. Hym. Eur. p.* 555. *C. Hbk. No.* 772.

On living and dead birch. May—Dec.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe. America. Siberia.

731. P. applanatus * Pers. *Fr. Hym. Eur. p.* 557. *C. Hbk. No.* 775.
On trunks, especially ash. Aug.—Oct.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Pegu.

732. P. fomentarius * L. *Fr. Hym. Eur. p.* 558. *C. Hbk. No.* 776.
On trunks, especially birch. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia. India. Australia. Java.

733. P. nigricans * Fr. *Hym. Eur. p.* 558. *C. Hbk. No.* 777.
On living and dead birch. May—Oct. 1400 ft.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Cuba. Java.

734. P. igniarius * L. *Fr. Hym. Eur. p.* 559. *C. Hbk. No.* 778.
On ash, poplar, willow, plum, cherry. May—Nov.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia. India. Ceylon. Australia. Tasmania. New Zealand. Java. Philippines. Admiralty Islands.

735. P. conchatus * Pers. *Fr. Hym. Eur. p.* 560. *C. Hbk. No.* 781.
On trunks. Aug.—Nov.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den. J. S.
England. Europe. America. Australia.

736. P. salicinus Fr. *Hym. Eur. p.* 560. *C. Hbk. No.* 782.
On willows. Autumn.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh. Greville.
England. Europe. America. Cape. Australia. New Zealand.

737. P. roseus * A. & S. *Fr. Hym. Eur. p.* 562. *B. & Br. No.* 1801.

Pileus corky-woody, hard, triangular, even, somewhat banded, *externally and internally rose-colour*, externally with a cinereous blackish fuliginousness as if scorched, within floccose-fibrous; pores minute, round, of the same colour.

On dressed wood in hot-house. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Conservatories, 1877. A. Robb.
Europe.

738. P. ulmarius * Sow. *Fr. Hym. Eur. p.* 562. *C. Hbk. No.* 783.

On old elm. Sept.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

739. P. cytisinus Berk. *Fr. Hym. Eur. p.* 562. *C. Hbk. No.* 785.

On laburnum.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Balhall, Menmuir. Rev. M. L. Anderson.
England. Europe.

740. P. connatus * Fr. *Hym. Eur. p.* 563. *C. Hbk. No.* 789.

On old trunks, elm. Autumn.

East. —— —— Tay —— Moray ——
West. Solway —— —— ——

England. Europe. Tahiti.

741. P. fraxineus * Bull. *Fr. Hym. Eur. p.* 563. *C. Hbk. No.* 784.

On old ash. May—Nov.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

742. P. annosus * Fr. *Hym. Eur. p.* 564. *C. Hbk. No.* 788.

On stumps. April—Dec.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe. America. Cuba.

743. P. radiatus* Sow. *Fr. Hym. Eur. p.* 565. *C. Hbk. No.* 790.

On hazel, alder, &c. Oct.—Feb.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe. America. Cuba. Venezuela.

744. P. polymorphus Rostk. *Hym. Eur. p.* 566. *B. & Br. No.* 1802.

Pileus resupinate, effused, coriaceous, margin reflexed, *curled, smooth, umber;* pores rather large, angular and torn, pallid. The whole plant chestnut-colour.

On fir in a fence.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.
Europe.

745. P. velutinus* Fr. *Hym. Eur. p.* 568. *C. Hbk. No.* 793.

On stumps. Nov.

East.	——	Forth	Tay	Dee	——	——
West.	——	——	——	——		

England. Europe. America. Siberia. St. Domingo. Java. New Zealand. Cuba. Japan. Philippines.

746. P. versicolor* L. *Fr. Hym. Eur. p.* 568. *C. Hbk. No.* 794.

On dead wood. April.—Dec.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	Solway	Clyde	Argyle	Ross		

England. Europe. America. Siberia. Cape. Juan Fernandez. Japan.[1] Australia. Tasmania. India. Ceylon. New Zealand. Cuba. St. Helena. Guadeloupe. Java.

747. P. abietinus* Dicks. *Fr. Hym. Eur. p.* 569. *C. Hbk. No.* 795.

On fir. July—Nov.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	Solway	Clyde	Argyle	——		

England. Europe. America. Australia.

5. RESUPINATI.

748. P. ferruginosus* Schrad. *Fr. Hym. Eur. p.* 571. *C. Hbk. No.* 798.

On logs. May—Nov.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America. Australia. Cuba.

749. P. violaceus Fr. *Hym. Eur. p.* 572. *C. Hbk. No.* 803.

On fir stumps. Jan.—May.

East. —— Forth —— Dee Moray ——
West. —— —— —— ——

England. Europe. America.

750. P. incarnatus A. & S. *Fr. Hym. Eur. p.* 573. *C. Hbk. No.* 802.

On fir. June—Nov.

East. —— Forth Tay —— —— ——
West. —— Clyde —— ——

England. Europe. America.

751. P. rufus Schrad. *Fr. Hym. Eur. p.* 573.

Effused, coriaceous, thin, *adnate*, even, smooth, *determinate*, *blood-rufous;* pores very small, thin, acute.

On broom.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Strachan. J. Sim.

Europe.

752. P. rhodellus* Fr. *Hym. Eur. p.* 573. *B. & Br. No.* 1806.

Effused, thin, adnate, *soft*, *white-flesh-colour*, *margin* determinate, *naked;* pores minute, nearly round, contiguous.

In Scotch fir wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1874. J. S.

Europe. America.

753. P. micans Ehrenb. *Fr. Hym. Eur. p.* 573. *B. & Br. No.* 1289.

Effused, thin, adnate, soft, *flesh-colour-whitish*, *circumference byssoid white; pores* very slender, *honey-combed*, angular, slightly crenate.

On ash. Nov.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Altyre. Rev. J. Keith.

England. Europe. America.

754. P. nitidus * A. & S. *Fr. Hym. Eur. p.* 574. *C. Hbk. No.* 799.
On dead wood. March.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

755. P. aneirinus * Smrft. *Fr. Hym. Eur. p.* 575. *C. Hbk. No.* 816.
On dead branches. Oct.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S.
England. Europe. Ceylon.

756. P. Rennyi * *B. & Br. No.* 1432.
Subiculum thick, pulvinate, pulverulent; forming a thick, at first somewhat frothy then pulverulent mass, white, turning to lemon-colour when dry; pores sparingly produced, white, elongated, dissepiments thin.
On Scotch fir stump, and running on the ground. Nov.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Warren Wood, 1873. J. S.
England.

757. P. terrestris * D. C. *Fr. Hym. Eur. p.* 576. *C. Hbk. No.* 814.
On naked soil. Sept.—Oct.

East.	——	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe. America.

758. P. subgelatinosus B. & Br. *No.* 1569.
Orbicular, forming little pulvinate masses with an obtuse raised border, which is at first tomentose and pallid, becoming black, of a somewhat gelatinous consistence; pores pale delicate grey, with an acute even edge, about $\frac{1}{70}$ inch diameter.
Apparently parasitic on a decurrent form of *P. amorphus.*
On dead wood.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Rannoch. Dr. B. White.

759. P. medulla-panis Pers. *Fr. Hym. Eur. p.* 576. *C. Hbk. No.* 806.
On decaying branches.

East.	Tweed	Forth	——	——	——	——
West.	——	——	——	——		

England. Europe. America.

760. P. vitreus * Pers. *Fr. Hym. Eur. p.* 577. *C. Hbk. No.* 807.

On dead wood, especially fir. Aug.—Nov.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

761. P. callosus * Fr. *Hym. Eur. p.* 577. *B. & Br. No.* 1431.

Very much effused, equal, tough, *entire, separable* like soft leather, white, similar at the circumference; *pores firm*, rounded equal, quite entire, *obtuse*. The pores are seated on a calosity 1–2 lines thick, firm but not hard, everywhere porous. Annual, and not in strata.

On dead wood. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den, 1874. J. S.
Europe. Ceylon.

762. P. vulgaris * Fr. *Hym. Eur. p.* 577. *C. Hbk. No.* 809.

On dead wood. April—Dec.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Ceylon. Australia. Juan Fernandez. Java. Cuba. Mauritius.

763. P. molluscus * Fr. *Hym. Eur. p.* 578. *C. Hbk. No.* 812.

On dead wood. Sept.—Nov.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

764. P. collabefactus * B. & Br. *No.* 1432.

Stratum quite smooth, resembling a *Corticium*; pores seem at first to arise from the mere collapsing of the substance, short, margin obtuse. The barren parts resemble exactly a very smooth *Corticium* like *C. calceum*.

On dead wood. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1873. J. S.

765. P. sanguinolentus A.&S. *Fr. Hym. Eur. p.* 578. *C. Hbk. No.* 811.

On dead branches. Sept.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

766. P. radula Pers. *Fr. Hym. Eur. p.* 578. *B. & Br. No.* 1808.

Effused, *white, compacted from the naked tomentose mycelium*, soft, villous beneath; pores medium sized, angular, toothed, pubescent when young.

On fir.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Strachan. J. Sim.

Europe. America.

767. P. vaporarius * Pers. *Fr. Hym. Eur. p.* 579. *C. Hbk. No.* 815.

On dead wood. Jan.—Dec.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——

England. Europe. America. Australia. Ceylon.

Var. **Secernibilis** Berk. *B. & Br. No.* 1022.

On fir leaves under moss. Autumn.

New Forres Wood. Rev. J. Keith.

768. P. Gordoniensis B. & Br. *Fr. Hym. Eur. p.* 579. *C. Hbk. No.* 813.

On fir poles.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Aboyne Castle. Rev. M. J. Berkeley.

769. P. Vaillantii Fr. *Hym. Eur. p.* 579. *C. Hbk. No.* 819.

On dead wood. April.

East. —— —— —— —— Moray ——
West. —— Clyde —— ——

England. Europe. America. Ceylon. Guiana.

770. P. farinellus Fr. *Hym. Eur. p.* 579. *B. & Br. No.* 1292.

White, widely effused, thin, *mycelium* naked, *flocculoso-pulverulent, not woven together*; pores thin, contiguous, unequal, somewhat flexuous, intricate.

Evanescent on being touched; of the consistence of *Thelephora sambuci* Pers.

On beech.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Aboyne. Rev. M. J. Berkeley.

771. P. blepharistoma* B. & Br. *No.* 1434.

Wholly resupinate, snow-white, mycelium arachnoid, somewhat mealy; pores small, dissepiments thin, margin ciliato-dentate.

Very thin and delicate; the ciliato-dentate margin of the pores very elegant.

On dead wood. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

772. P. reticulatus* Pers. *Fr.Hym.Eur.p.*580. *B.&Br.No.*1810.

Orbicular, thin, *evanescent*, white, radiating like flax at the floccose margin; pores *distant, cup-shaped.*

On rotten wood. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
Europe. America.

773. P. hybridus* B.& Br. *Fr.Hym.Eur.p.*581. *C.Hbk.No.*820.

On dead wood, chiefly oak. May—Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den. J. S.
England. Europe.

774. P. ramentaceus* B. & Br. *No.* 1809.

Somewhat orbicular; subiculum white, tomentose, margin obsolete, pores honey-coloured, large, $\frac{1}{32}$ inch across, somewhat hexagonal, dissepiments thin, slightly rigid, acute.

On Scotch fir. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1874. J. S.

775. P. hymenocystis* B. & Br. *No.* 1810.

Snow-white; beneath and at the margin arachnoid; pores large; the scarious dissepiments collapsing, at length pallid.

On dead wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875. J. S.

XXIV. TRAMETES Fr.

776. T. pini Brot. *Fr. Hym. Eur. p.* 582. *C. Hbk. No.* 821.

On living pine. 1000 ft.

East. —— —— —— Dee Moray ——
West. —— —— —— ——

Ballochbuie. Dr. B. White. Grantown. Darnaway. Rev. J. Keith.

England. Europe. America. Australia.

777. T. suaveolens L. *Fr. Hym. Eur. p.* 584. *C. Hbk. No.* 822.

On willows.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

778. T. mollis * Smrft. *Fr. Hym. Eur. p.* 585. *P. cervinus* Pers. *C. Hbk. No.* 787.

On dead wood, especially beech. Jan.—Dec.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde —— ——

England. Europe. America. Australia. Philippines. Kamtschatka.

XXV. DAEDALIA Pers.

779. D. quercina * L. *Fr. Hym. Eur. p.* 586. *C. Hbk. No.* 825.

On dead oak. June—Nov.

East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe.

780. D. unicolor * Bull. *Fr. Hym. Eur. p.* 588. *C. Hbk. No.* 827.

On stumps, especially birch. July—Oct.

East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Siberia. Japan.

781. D. latissima Fr. *Hym. Eur. p.* 589. *C. Hbk. No.* 828.

On dead wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Balnamoon. Rev. M. L. Anderson.

England. Europe.

782. D. ferruginea Schum. *Fr. Hym. Eur. p.* 589.

Pileus coriaceous, effuso-reflexed, zoned, *yellow-ferruginous, and, when young, with a villous-white margin*, fleshy within; hymenium porous, then narrowly labyrinthiform, tawny.

Of uncertain affinity.

On dead wood.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Strachan. J. Sim.

Europe.

XXVI. HEXAGONA Poll.

XXVII. FAVOLUS Fr.

XXVIII. MERULIUS Fr.

783. M. tremellosus Schrad. *Fr. Hym. Eur. p.* 591. *C. Hbk. No.* 829.

On decayed birch stumps. Sept.—Feb.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Siberia.

784. M. aurantiacus Klotzsch. *Fr. Hym. Eur. p.* 591. *C. Hbk. No.* 832.

On dead birch. May.

East. —— —— —— Dee Moray ——
West. —— Clyde Argyle ——

England. Arctic.

785. M. corium * Fr. *Hym. Eur. p.* 591. *C. Hbk. No.* 830.

On dead wood. March—Dec. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Juan Fernandez.

786. M. himantioides Fr. *Hym. Eur. p.* 592. *C. Hbk. No.* 831.
On fir wood. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Dupplin Woods. Dr. M. C. Cooke.
England. Europe.

787. M. molluscus * Fr. *Hym. Eur. p.* 592. *C. Hbk. No.* 833.
On fir branches. Sept.—Feb.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Siberia.

788. M. rufus * Pers. *Fr. Hym. Eur. p.* 593. *C. Hbk. No.* 835.
On dead oak. Oct.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Siberia.

789. M. serpens * Tode. *Fr. Hym. Eur. p.* 593. *C. Hbk. No.* 836.
On dead fir. Oct.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

790. M. pallens * Berk. *Fr. Hym. Eur. p.* 593. *C. Hbk. No.* 837.
On dead fir. Oct.—Dec.
East. —— Forth Tay —— —— ——
West. —— —— —— —— ——
England. Australia.

791. M. Carmichaelianus Grev. *Fr. Hym. Eur. p.* 593. *C. Hbk. No.* 838.
On bark.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.

792. M. lachrymans * Wulf. *Fr. Hym. Eur. p.* 594. *C. Hbk. No.* 839.
On wood. Jan.—Dec.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——
England. Europe. America. Siberia.
Var. **pulverulentus** Fr. Strachan. J. Sim.

XXIX. POROTHELIUM Fr.

793. P. Freisii Mont. *Fr. Hym. Eur. p.* 595. *C. Hbk. No.* 840.
On dead pine. Nov.—Feb. 3000 ft.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

794. P. Stevensoni* B. & Br. *No.* 1683.
Substance rather thick, gelatinous, margin rather coarsely hispid, at length more or less denuded; warts of the hymenium distinct, interstices very smooth, bearing at the apex a limpid, diaphanous, yellow globule.
On dressed pine rail. Nov.
East. —— —— Tay. —— —— ——
West. —— —— —— ——
Glamis, Glen of Ogilvy, 1877. J. S.

795. P. Keithii* B. & Br. *No.* 1684.
Narrowly adnate, slightly umber-coloured; circumference very thin, at first somewhat gelatinous; warts short, at length collapsed, gelatinous in the centre.
On dead fir. April.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
Sanquhar. Dunphail. Rev. J. Keith. Glamis. J. S.

796. P. confusum* B. & Br. *No.* 1685.
Narrowly adnate, pallid; margin very thin, arachnoid; substance at first floccoso-pulverulent; warts very small.
On fir sticks. June—Sept.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
Glentanner. Rev. M. J. Berkeley. Glamis. J. S.
Pitoulish. Rev. J. Keith.
England. America.

XXX. SOLENIA Hoffm.

797. S. ochracea* Hoffm. *Fr Hym. Eur. p.* 596. *C. Hbk. No.* 957.
On dead wood. Aug.—Dec.
East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

Order III.—HYDNEI.

XXXI. HYDNUM Linn.

798. H. imbricatum L. *Fr. Hym. Eur. p.* 598. *C. Hbk. No.* 842.

In pine woods. Sept.—Nov. 1300 ft.

East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe. America.

799. H. laevigatum Swartz *Fr. Hym. Eur. p.* 599. *B. & Br. No.* 1572.

Pileus fleshy, *compact*, firm, regular, plane, *even, very smooth, umber*; margin circinate (not repand); 4–6 inches broad, thick; stem thick, variable, when short, unequal, when longer, equal, even, paler, as are the thin spines.

In pine woods. Aug.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe.

800. H. fragile Fr. *Hym. Eur. p.* 599. *B. & Br. No.* 1366.

Pileus fleshy, fragile, unequal, *at first pubescent, then become smooth, wrinkled, cinereous* or brick-colour, margin undulated and lobed; stem stout, unequal, smooth, becoming cinereous; spines whitish-grey.

In pine woods. Sept.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

801. H. repandum* L. *Fr. Hym. Eur. p.* 601. *C. Hbk. No.* 844.

In woods. Aug.—Nov. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Siberia.

Var. **rufescens*** Pers. Distribution as of *H. repandum*.

802. H. compactum Pers. *Fr. Hym. Eur. p.* 603. *C. Hbk. No.* 845.

In fir wood. Sept.—Nov. 1400 ft.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

803. H. aurantiacum A. & S. *Fr. Hym. Eur. p.* 603. *B. & Br. No.* 1368.

Pileus corky, compact, turbinato-dilated, *with slight elevations, not zoned, orange*, often covered with a whitish down, *internally zoned;* stem short, orange; spines whitish, becoming fuscous.

In pine woods. Sept.—Nov.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
Europe.

804. H. ferrugineum Fr. *Hym. Eur. p.* 603. *B. & Br. No.* 1369.

Pileus spongy-corky, soft, at first covered with a whitish down *exuding blood-like drops* in its hollows, *then* more even, *and internally ferruginous;* stem unequal, and, as well as the spines, fuscous-ferruginous.

In fir wood. Aug.—Oct.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.
Europe. Siberia.

805. H. scrobiculatum Fr. *Hym. Eur. p.* 604. *B. & Br. No.* 1294.

Ferruginous; pileus corky-coriaceous, *clavate, then plano-infundibuliform*, pubescent; *disc pitted with hollows, squamose, internally zoned;* stem very short, naked, rooting; spines very short.

In fir woods. Aug.—Nov.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rothiemurchus. Rev. J. Keith.
England. Europe. Siberia.

806. H. zonatum Batsch. *Fr. Hym. Eur. p.* 605. *C. Hbk. No.* 846.

In fir woods. Aug.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

807. H. graveolens Delast. *Fr. Hym. Eur. p.* 605. *C. Hbk. No.* 848.

In fir woods. Sept.—Nov.

East. —— —— —— —— Moray ——
West. Solway —— —— ——

England. Europe. America.

808. H. cyathiforme Schaeff. *Fr. Hym. Eur. p.* 606. *H. tomentosum, B. & Br. No.* 1025.

Pileus coriaceous, *thin*, plano-infundibuliform, zoned, *pale-cinereous* as well as the *stem*, which is slender, smooth, disc somewhat tomentose; margin and spines white.

On fir wood. Sept.—Oct.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.
England. Europe.

809. H. auriscalpium * L. *Fr. Hym. Eur. p.* 607. *C. Hbk. No.* 850.

On fir cones, and among fir leaves. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross

England. Europe.

810. H. ochraceum * Pers. *Fr. Hym. Eur. p.* 612. *C. Hbk. No.* 855.

On dead branches. Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Ceylon.

811. H. ferruginosum Fr. *Hym. Eur. p.* 613. *C. Hbk. No.* 860.

On decayed wood.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh. Greville.
England. Europe. America.

812. H. limonicolor.* B. & Br. *No.* 1686.

Adnate, bright lemon-yellow; spines crowded, acute, short; mycelium white, sparing or obsolete.

On stone, buried among pine leaves. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Cram's Hill, 1876. J. S.

813. H. spathulatum Schwein. *Fr. Hym. Eur. p.* 614. *C. Hbk. No.* 863.

On dead wood. Jan.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Auchindenny, Edinburgh. Greville.
England. Europe. America.

814. H. multiforme* B. & Br. *No.* 1687.

Ochrey-white, at first even, resembling a *Corticium*, at length here and there fertile; spines very acute, crowded, becoming pallid and fimbriate; texture floccoso-mealy.

Very variable, sometimes almost towy, with the margin inflexed.

On dead wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1877. J. S.

815. H. udum* Fr. *Hym. Eur. p.* 615. *C. Hbk. No.* 864.

On dead branches. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

816. H. nodulosum* Fr. *Hym. Eur. p.* 616. *B. & Br. No* 1689.

Very widely effused, crustaceous, narrowly adnate, smooth, whitish, even, and at the same time *nodulose;* spines very long, depressed on the even part adnate with the wood, on the inferior side of the nodules free pendulous.

On fir stumps. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1876. J. S.
Europe.

817. H. Stevensoni* B. & Br. *No.* 1437.

White, effused, mealy beneath, here and there byssoid; spines cylindrical, obtuse or truncate, sometimes compressed, apices pulverulent.

On dead wood. March.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
America (Sierra Nevada).

818. H. niveum* Pers. *Fr. Hym. Eur. p.* 616. *C. Hbk. No.* 865.

On decayed wood. April—Nov.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe.

Var. **persistenter-niveum.*** *C. Hbk. No.* 865.
Glamis. J. S.

819. H. farinaceum* Pers. *Fr. Hym. Eur. p.* 616. *C. Hbk. No.* 866.

On dead wood. Oct.—Nov.

East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——

England. Europe. America. Ceylon.

820. H. sepultum* B. & Br. *No.* 1813.

Wholly resupinate, golden, margin white; spines acute, medium-sized.

Forming little scattered patches.

On stones, buried among pine leaves. Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1876. J. S. Forres. Rev. J. Keith.

XXXII. HERICIUM Pers.

XXXIII. TREMELLODON Pers.

XXXIV. SISTOSTREMA Pers.

821. S. confluens Pers. *Fr. Hym. Eur. p.* 619. *C. Hbk. No.* 869.

On the ground and on sticks, in woods. Autumn.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

XXXV. IRPEX Fr.

822. I. pendulus A. & S. *Fr. Hym. Eur. p.* 620. *C. Hbk. No.* 870.

On pine wood.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——

Castle Semple. Edinburgh Herbarium. Menmuir. Rev. M. L. Anderson.

Europe. America.

823. I. Johnstonii Berk. *Fr. Hym. Eur. p.* 621. *C. Hbk. No.* 871.

On dead beech.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Berwick. Johnstone.

824. I. obliquus* Schrad. *Fr. Hym. Eur. p.* 622. *C. Hbk. No.* 872.

On stumps and dead branches. Nov.—Feb.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

825. I. deformis Fr. *Hym. Eur. p.* 622.

Effused, crustaceous, thin, white, circumference pubescent, somewhat byssoid; *teeth extended in awl-shape from a minutely porous base, thin,* subdigitato-incised.

On wood.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Strachan. J. Sim.
Europe.

XXXVI. RADULUM Fr.

826. R. orbiculare* Fr. *Hym. Eur. p.* 623. *C. Hbk. No.* 874.

On birch, cherry, and larch. Oct.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——

England. Europe. America.

827. R. quercinum* Fr. *Hym. Eur. p.* 623. *C. Hbk. No.* 875.

On dead oak. Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. J. S.
England. Europe.

828. R. tomentosum Fr. *Hym. Eur. p.* 624. *B. & Br. No.* 1439.

Effused, innate, rather thick, becoming whitish-pallid, *circumference swelling, erect, tomentose;* tubercles short, crowded, angular, obtuse, smooth, confluent.

On *Pyrus aucuparia.*

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson. New Pitsligo. Rev. J. Fergusson.
Europe.

829. R. deglubens B. & Br. *No.* 1440.

Orbicular, ferruginous, somewhat diaphanous; tubercles erect, somewhat cylindrical, irregular, scattered, interstices even, pulverulent from the white spores.

On ash. Nov.—Jan.

East. —— —— —— Dee Moray ——
West. —— —— —— ——

Sanquhar, 1874. Rev. J. Keith. New Pitsligo. Rev. J. Fergusson.

830. R. corallinum* B. & Br. *No.* 1441.

Effused, white; subiculum shining, very thin, pelliculose; tubercles fasciculate (fascicles ¼ inch or more across), divided downwards, obtuse, coralloid.

Effused for 3 inches over branches partially covered with lichens.

On oak branches. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

831. R. epileucum* B. & Br. *No.* 1442.

Effused for several inches, ochraceous-white, wholly resupinate; subiculum snow-white, covered by a waxy stratum; tubercles scattered, cylindrical, under a lens fimbriated at the apex, deciduous. Tubercles falling out and showing the white mealy subiculum, round which is an annular depression.

On decorticated wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

XXXVII. PHLEBIA Fr.

869. P. merismoides* Fr. *Hym. Eur. p.* 624. *C. Hbk. No.* 877.

On stumps and branches. Sept.—Feb.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

870. P. radiata* Fr. *Hym. Eur. p.* 625. *C. Hbk. No.* 878.

On dead wood. Nov.

East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe. America.

871. P. vaga Fr. *Hym. Eur. p.* 625. *C. Hbk. No.* 880.

On decaying wood.

East. —— —— —— Dee —— ——
West. —— —— —— ——
Strachan. J. Sim.
England. Europe. America.

XXXVIII. GRANDINIA Fr.

832. G. granulosa* Pers. *Fr. Hym. Eur. p.* 626. *C. Hbk. No.* 882.

On dead branches. Oct.—Feb.

East. Tweed Forth Tay Dee Moray ——
West. —— —— Argyle Ross
England. Europe. America. Ceylon.

833. G. mucida* Fr. *Hym. Eur. p.* 626. *B. & Br. No.* 1691.

Between waxy and mucous, effused, subinnate, *pinkish-yellow*, circumference determinate, somewhat radiating; hymenium contiguous; *granules* crowded, *large, unequal*, hemispherical, soft. When moist somewhat gelatinous, becoming wrinkled in drying.

On rotting pine. May—Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den, 1877. J. S.
Europe.

834. G. papillosa Fr. *Hym. Eur. p.* 626. *C. Hbk. No.* 881.

On dead branches.

East. —— —— —— Dee Moray ——
West. —— —— —— ——

Strichen. Troup. Rev. J. Fergusson.
England. Europe.

835. G. crustosa* Pers. *Fr. Hym. Eur. p.* 627. *B. & Br. No.* 1443.

Floccoso-mealy, irregularly effused, crustaceous, adnate, white; granules somewhat rounded, crowded, obtuse, of the same colour at the apex.

On *Polyporus versicolor.* Feb

East. —— —— Tay —— —— ——
West. —— —— —— ——

Den of Dun, 1874. J. S.
Europe.

Var. **lignorum*** A. & S. *Hym. Eur. p.* 627. *B. & Br. No.* 1690.

Often yellowish, granules unequal, often excavated at the apex.

On rotting pine. May 1877. Glamis. J. S.

XXXIX. ODONTIA.

836. O. fimbriata* Pers. *Fr. Hym. Eur. p.* 627. *C. Hbk. No.* 884.

On dead wood. Sept.—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——

England. Europe. America.

XL. KNEIFFIA Fr.

837. K. setigera* Fr. *Hym. Eur. p.* 628. *C. Hbk. No.* 885.

On dead wood. April.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

838. K. subgelatinosa * *B. & Br. No.* 1444.

Thin, yellowish then ash-colour; granules minute, somewhat gelatinous, fimbriate at the tips. Accompanied by a green alga, which penetrates the tissue of the fungus.

On stumps of fir. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

XLI. MUCRONELLA Fr.

Order IV.—THELEPHOREI.

XLII. CRATERELLUS Fr.

839. C. lutescens Pers. *Fr. Hym. Eur. p.* 630. *C. Hbk. No.* 886.

In moist woods.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

840. C. cornucopioides L. Fr. *Hym. Eur. p.* 631. *C. Hbk. No.* 887.

In woods. Sept.

East. —— —— Tay —— —— ——
West. Solway Clyde —— ——

England. Europe. America. Siberia.

841. C. sinuosus * Fr. *Hym. Eur. p.* 631. *C. Hbk. No.* 888.

In mixed woods. Sept.—Nov.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— Ross

England. Europe. America.

842. C. crispus * Sow. Fr. *Hym. Eur. p.* 631. *C. Hbk. No.* 889.

In mixed woods. Oct.—Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.

England. Europe. America.

XLIII. THELEPHORA Ehrb.

843. T. caryophyllea Schaeff. *Fr.Hym.Eur.p.*634. *C.Hbk.No.*894.

On the ground about roots, especially fir.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

844. T. tuberosa Grev. *Fr. Hym. Eur. p.* 634. *C. Hbk. No.* 892. *B & Br. No.* 1692.

On lawn. Autumn.

East —— Forth Tay —— —— ——
West. —— —— —— ——

Foxhall, Edinburgh. Greville. Moncrieffe. Dr. B. White.

This interesting species had not been found since the time of Greville.

845. T. anthocephala Bull. *Fr. Hym.Eur.p.*634. *C.Hbk.No.*893.

On the ground in woods.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Crathes. J. Sim.

England. Europe. America.

846. T. palmata * Scop. *Fr. Hym. Eur. p.* 634. *C. Hbk. No.* 895.

On the ground in woods. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. India.

847. T. intybacea * Pers. *Fr. Hym. Eur. p.* 635. *B. & Br.* 1576.

Caespitose, soft, *whitish then rufous-ferruginous*, at length fuliginous; stems somewhat lateral, growing together; pileoli imbricated, fibrous; dilated at the *margin, at first white-fimbriate* then entire, and of the same colour; hymenium inferior, papillose, somewhat floccose. Tufts sometimes central, obconic, sometimes lateral, with somewhat triangular pileoli.

On the ground in Scotch fir wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Warren Wood, 1875. J. S.

Europe.

848. P. terrestris Ehrb. *Fr. Hym. Eur. p.* 635. *C. Hbk. No.* 896.
In fir woods.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

849. T. laciniata * Pers. *Fr. Hym. Eur. p.* 636. *C. Hbk. No.* 899.
On stumps, chiefly Scotch fir. Aug.—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America.

850. T. biennis Fr. *Hym. Eur. p.* 636. *C. Hbk. No.* 900.
On the ground.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Balnamoon. Rev. M. L. Anderson.
England. Europe. America.

851. T. mollissima * Pers. *Fr. Hym. Eur. p.* 636. *C. Hbk. No.* 898.
On the ground in mixed woods. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. Ballinluig. J. S.
England. Europe.

852. T. cristata Pers. *Fr. Hym. Eur. p.* 637. *C. Hbk. No.* 897.
On the ground in woods among mosses.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Craiglockhart. Greville.
England. Europe.

853. T. sebacea * Pers. *Fr. Hym. Eur. p.* 637. *C. Hbk. No.* 904.
On stumps and logs. Jan.—Oct.
East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. America. Tasmania.

854. T. caesia * Pers. *Fr. Hym. Eur. p.* 638. *C. Hbk. No.* 903.
On stumps and the ground in woods. Nov.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Warren Wood. J. S.
England. Europe.

XLIV. CLADODERRIS Pers.

Coriaceous; hymenium woody, radiated on branched ribs, persistent, at length roughened with warts. *Fr. Sum. Veg. Scan.*, p. 332.

855. C. minima B. & Br. *No.* 1692.

White, flabelliform, from 2–3 lines across, springing from a stem-like or obsolete base, resupinate; pileus tomentose; hymenium radiated on branched ribs.

Though small it has exactly the structure of the exotic species.

On birch. Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Cram's Hill, 1876. J. S.

Europe.

XLV. STEREUM Pers.

856. S. ochroleucum * Fr. *Hym. Eur. p.* 639. *B. & Br. No.* 1818.

Pileus coriaceo-membranaceous, free, expanded, *flaccid, silky, zoned*, hoary; hymenium even, smooth, becoming yellowish. Commonly large, with zones of the same colour, or fuscous. Covering of the pileus here and there disappearing.

On wood. Jan.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

Europe. America. Siberia. Tasmania. New Zealand. Cuba.

857. S. purpureum * Pers. *Fr. Hym. Eur. p.* 639. *C. Hbk. No.* 910.

On dead wood, especially fir. May—Dec.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——

England. Europe. America.

858. S. vorticosum Fr. *Hym. Eur. p.* 639. *B. & Br. No.* 1578.

Pileus coriaceous, effuso-reflexed, obscurely zoned, *strigosely hairy*, pallid, margin of the same colour; hymenium *somewhat ribbed*, smooth, *becoming purplish.*

On beech.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.

Europe.

859. S. hirsutum* Willd. *Fr. Hym. Eur. p.* 639. *C. Hbk. No.* 911.
On wood. Jan.—Dec.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. India. Australia. Tasmania. New Zealand. Teneriffe. Cuba. Java.

860. S. spadiceum* Fr. *Hym. Eur. p.* 640. *C. Hbk. No.* 912.
On stumps and branches, chiefly ash and oak. Oct.—Dec.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Australia. Tasmania.

861. S. sanguinolentum* A. & S. *Fr. Hym. Eur. p.* 640. *C. Hbk. No.* 913.
On wood, chiefly pine. June—Nov.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

862. S. avellanum Fr. *Hym. Eur. p.* 642. *Thelephora, Eng. Fl.* v. *p.* 167.
On bark and wood, especially hazel.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe.

863. S. rugosum* Pers. *Fr. Hym. Eur. p.* 643. *C. Hbk. No.* 914.
On stumps, &c. Jan.—Dec.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. New Zealand.
Var. **lauro-cerasi*** On laurel. Distribution as of *S. rugosum*.

864. S. pini* Fr. *Hym. Eur. p.* 643. *B. & Br. No.* 1579.
Coriaceo-cartilaginous, resupinate, peltato-adnate, somewhat marginate, *smooth beneath, pallid, at length bullate;* hymenium flesh-purplish, then becoming fuscous, pruinose.
On bark of Scotch fir.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
Glamis Den. J. S. Aviemore. Rev. J. Keith.
Europe. America. Siberia.

865. S. rufum * Fr. *Hym. Eur. p.* 644. *B. & Br. No.* 1580.

Coriaceo-cartilaginous, erumpent, *tuberculiform then somewhat rounded, marginate*, rufous, becoming fuscous, smooth beneath; hymenium greyish-pruinose, at length bullato-tuberculose.

On dead pine and ash. Sept.—March.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Glamis Den, 1874. J. S. Grantown. Rev. J. Keith. Europe.

XLVI. HYMENOCHÆTE Lev.

866. H. rubiginosa * Schrad. *C. Hbk. No.* 916. *Stereum, Fr. Hym. Eur. p.* 641.

On stumps. July—Nov.

East. Tweed Forth Tay —— —— ——
West. Solway Clyde —— ——

England. Europe. America. India. Tasmania. Cuba.

867. H. corrugata * Berk. *C. Hbk. No.* 918. *Corticium, Fr. Hym. Eur. p.* 656.

On dead wood. Aug.—Nov.

East. —— Forth Tay —— —— ——
West. —— Clyde Argyle ——

England. Europe. America. Ceylon.

868. H. Stevensoni * B. & Br. *No.* 1817.

Pallid fawn-colour, rigid, margin obtuse, raised, hispid with rufous bristles. A very distinct species.

On bark of yew. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Craig-y-barns, Dunkeld, 1877. J. S.

XLVII. AURICULARIA Bull.

XLVIII. CORTICIUM Fr.

872. C. evolvens * Fr. *Hym. Eur. p.* 646. *C. Hbk. No.* 921.

On dead wood, especially cherry. Oct.—Feb.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.

England. Europe. America.

873. C. salicinum Fr. *Hym. Eur. p.* 647. *B. & Br. No.* 1581.

Coriaceous, soft, rigid when dry, persistently *cup-shaped, attached at the centre,* externally white-villose; *hymenium* nearly even, naked, *persistently blood-red, contiguous when dry.* Exceedingly elegant; like a *Peziza.*

This is certainly the same with *Exidia cinnabarina* B. & C., which has the curved spores of *Exidia.* We have not sufficient specimens of the European form to justify us in separating it from *Corticium,* to which genus it can scarcely belong. B. & Br.

On *Salix aurita.* Aug.—Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Kinrara. Rev. J. Keith.

Europe.

874. C. amorphum * Pers. *Fr.Hym.Eur.p.*648. *B.&Br.No.*1582.

Waxy-pliant, somewhat coriaceous, *cup-shaped then flattened,* confluent, marginate. externally white-tomentose; hymenium *even, contiguous, becoming pale.*

This curious plant is so like large specimens of *Peziza calycina* that it is not surprising that the two should have been confounded, and in consequence the plant figured by Willkomm under the name is really *P. calycina.* We were at first inclined to think that it might be a conidiiferous form of the *Peziza* in question, analogous to *Cyphella Curreyi;* but the structure is such as to make us consider it autonomous, and probably the type of a new genus, for it does not agree well with the characters of *Corticium.* The substance is white and fleshy, consisting of rather coarse threads, which at the base form a close sclerotioid network. The hymenium consists of colourless threads, and orange-coloured clavate bodies filled with pigment. These at length project beyond the surface, and produce four globose rough spores ·001 inch in diameter, which contain an angular body within which looks like a cystolith. After a time each spore becomes elliptic, and now measures ·0012 inch in length, produces about eight elliptic echinulate sporidia in its cavity, which are from ·0004-·0005 inch long, a circumstance without parallel, as far as we know, in *Hymenomycetes.* All these points have been observed by each of us independently. B. & Br.

On silver fir. Aug.—Oct.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

Perth. Dunkeld. Keir. Dr. B. White.

Europe.

875. C. giganteum * Fr. *Hym. Eur. p.* 648. *C. Hbk. No.* 922.
On pine stumps. Oct.—April.
East. —— —— Tay Dee Moray ——
West. Solway Clyde Argyle ——
England. Europe. America. Ceylon.

876. C. lacteum * Fr. *Hym. Eur. p.* 649. *C. Hbk. No.* 923.
On dead wood. Nov.—Feb.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

877. C. arachnoideum * Berk. *Fr. Hym. Eur. p.* 649. *C. Hbk. No.* 924.
On wood, lichens, &c. Oct.—Feb.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. America. Australia. Tasmania.

878. C. laeve * Pers. *Fr. Hym. Eur. p.* 649. *C. Hbk. No.* 925.
On dead wood. Nov.—March.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. India. Ceylon. Tasmania. New Zealand. Cuba. Vera Cruz.

879. C. roseum * Pers. *Fr. Hym. Eur. p.* 650. *C. Hbk. No.* 926.
On dead wood, birch, &c. Oct.—Feb.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Tasmania.

880. C. velutinum * D. C. *Fr. Hym. Eur. p.* 650. *C. Hbk. No.* 927.
On dead wood. Aug.—Feb.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

881. C. lactescens * Berk. *Fr. Hym. Eur. p.* 650. *C. Hbk. No.* 932.
On dead wood. Oct.—Feb.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. Moncreiffe. J. S.
England. Europe.

882. C. sanguineum* Fr. *Hym. Eur. p.* 650. *C. Hbk. No.* 928.

On dead pine. Nov.—Feb.

East.	——	Forth	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe.

883. C. sulphureum* Fr. *Hym. Eur. p.* 650. *C. Hbk. No.* 929.

On dead wood. Nov.—Dec.

East.	——	——	Tay	——	Moray	——
West.	——	——	Argyle	——		

England. Europe. America. Tasmania.

884. C. cinnamomeum* Pers. *Hym. Eur. p.* 650. *B. & Br. No.* 1584.

Effused, irregular in becoming confluent, adpressed, *cinnamon*, fibrilloso-strigose beneath and at the circumference; hymenium fleshy, soft, *smooth, naked*, of the same colour, cracked when dry.

On birch log. Nov.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis Den, 1874. J. S.
Europe.

885. C. caeruleum Schrad. *Fr. Hym. Eur. p.* 651. *C. Hbk. No.* 930.

On fir branches.

East.	——	——	——	Dee	——	——
West.	——	——	——	——		

Middleton, Aberdeen. Professor Dickie.
England. Europe. America. Australia. Ceylon.

886. C. porosum B. & Curt. *B. & Br. No.* 1821.

Resupinate, milk-white, here and there porous, margin free, reflexed. The pores look as if little dew-drops had settled on the hymenium, which had in consequence contracted, or rather retracted.

On wood.

East.	——	——	——	Dee	——	——
West.	——	——	——	——		

Aboyne. Rev. M. J. Berkeley.
America.

887. C. calceum* Pers. *Fr. Hym. Eur. p.* 652. *C. Hbk. No.* 933.

On pine wood. Oct.—Feb.

East.	——	Forth	Tay	——	——	——
West.	——	Clyde	——	——		

England. Europe. America. Cape. Ceylon.

888. C. puberum * Fr. *Hym. Eur. p.* 652. *B. & Br. No.* 1822.

Widely effused, waxy, narrowly adnate, indeterminate white, or clay-colour; *hymenium* even, *velvety with short bristles*, cracked in drying.

On dead wood.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

Aboyne. Rev. M. J. Berkeley. Forres. Rev. J. Keith.
Glamis. J. S.
Europe.

889. C. scutellare * B. & Curt. *Grevillea* ii. *p.* 4. *B. & Br.* 1825.

Resupinate, effused, immarginate, whitish, then slightly tan-colour; hymenium broken up into minute areolæ.

On *Ulex.*

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Strachan. J. Sim. Glamis. J. S.
America.

890. C. lividum * Pers. *Fr. Hym. Eur. p.* 652. *C. Hbk. No.* 934.

On dead birch. Aug.—April.

East. Tweed —— Tay —— —— ——
West. —— —— Argyle ——

England. Europe.

891. C. ochraceum * Fr. *Hym. Eur. p.* 652. *C. Hbk. No.* 935.

On pine stumps. Nov.—Dec.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

892. C. quercinum * Pers. *Fr. Hym. Eur. p.* 653. *C. Hbk. No.* 936.

On oak branches. Aug.—April. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America.

893. C. cinereum * *Fr. Hym. Eur. p.* 654. *C. Hbk. No.* 937.

On dead branches. Nov.—May.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe. America.

894. C. incarnatum * Fr. *Hym. Eur. p.* 654. *C. Hbk. No.* 938.
On dead pine, broom, whin, &c. Aug.—March. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Ceylon. Cuba.

895. C. nudum * Fr. *Hym. Eur. p.* 655. *C. Hbk. No.* 939.
On dead wood. Nov.—Feb.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe. Australia.
Var. **citrinum** Pers. Moncreiffe. Dr. B. White.

896. C. confluens Fr. *Hym. Eur. p.* 655. *C. Hbk. No.* 940.
On dead branches.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Braid Hermitage. Greville.
England. Europe.

897. C. polygonium Pers. *Fr. Hym. Eur. p.* 655. *C. Hbk. No.* 941.
On dead branches.
East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England. Europe. America. New Zealand.

898. C. violaceo-lividum Fr. *Hym. Eur. p.* 655. *B. & Br. No.* 1696.
Somewhat effused, adnate, indurated *violaceous-livid;* hymenium spuriously corrugated, tuberculose, sprinkled with a *thin white substance like hoar-frost.*
On dead wood.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1877. J. S.
Europe.

899. C. limitatum Fr. *Hym. Eur. p.* 656. *B. & Br. No.* 1697.
Somewhat rounded, narrowly adnate, grumous, at length indurated, smooth, lurid, becoming very pale, *circumference marked with a black line;* hymenium naked.
The dark zones and dull nodular hymenium are characteristic.
On *Cytisus.*
East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
Europe.

900. C. comedens * Nees. *Fr. Hym. Eur. p.* 656. *C.Hbk.No.* 942.

On dead branches. Nov.—March. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Ceylon.

901. C. putaneum * Schum. *Fr.Hym.Eur.p.*657. *C.Hbk.No.*905.

On dead wood. Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

902. C. stabulare Fr. *Hym. Eur. p.* 658.

Effused, when young byssoid, white, then fleshy-soft, *vinous-fuscous*, byssoid at the circumference, white; hymenium tuberculose, *white-pruinose*, tubercles collapsing.

In fir wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
Europe.

903. C. laxum Fr. *Hym. Eur. p.* 659. *C. Hbk. No.* 906.

On dead fir. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
England. Europe.

904. C. byssoideum Pers. *Fr. Hym. Eur. p.* 659. *Thelephora, C. Hbk. No.* 902.

On mosses, &c.

East. —— —— —— Dee Moray ——
West. —— —— —— ——
England. Europe.

905. C. aridum * Fr. *Hym. Eur. p.* 659. *C. Hbk. No.* 907.

On dead wood, especially fir. Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

906. C. serum * Pers. *Fr. Hym. Eur. p.* 659. *B. & Br. No.* 1583.

Broadly effused, incrusting, thin, *white*, when fresh fleshy, *smooth*, *pruinose*, then, and when dry, *flocculose-splitting*, with rounded, crowded, equal papillæ.

A very curious species, some specimens approaching, if not identical with, *Hydnum papyraceum*. The aculei are mostly very distant, either entire or plumose at the tips, with the interstices just like the hymenium of a true *Corticium*. Sometimes they are radiato-floccose, but there are intermediate states. B. & Br.

On trunks.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S. Menmuir. Rev. M. L. Anderson.
England. Europe.

907. C. sambuci* Pers. *Fr. Hym. Eur. p.* 660. *C. Hbk. No.* 943.

On elder. Aug.—Dec.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe. America.

908. C. ferrugineum Pers. *Fr. Hym. Eur. p.* 661. *B. & Br. No.* 1585.

Effused, adnate, everywhere *tomentose*, *ferruginous;* hymenium papillose, pulveraceous.

On branches. Oct.

East.	——	——	——	Moray	——
West.	——	——	——	——	

Altyre. Rev. J. Keith.
England. Europe.

909. C. lacunosum B. & Br. *No.* 1371. *Fr. Hym. Eur. p.* 661.

Broadly effused, soft, mycelium *woolly-tawny, lacunose;* hymenium *pulverulent.*

On branches. Sept.

East.	——	——	——	Dee	——	——
West.	——	——	——	——		

Aboyne, 1870. Rev. M. J. Berkeley.

910. C. anthochroum Pers. *Fr. Hym. Eur. p.* 661. *C. Hbk. No.* 909.

On birch sticks. Feb.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Altyre. Rev. J. Keith.
England. Europe.

XLIX. CYPHELLA Fr.

911. C. ochroleuca B. & Br. *Fr.Hym.Eur.p.*662. *C.Hbk.No.*948.

On bramble sticks.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grangehall. Rev. J. Keith.
England. Europe.

912. C. stuppea B. & Br. *No.* 1698.

Erumpent, sessile, peziza-form, externally coarsely hispid, brownish, then becoming whitish; hymenium fuscous.

Bursting through the tender cuticle of broom. Mar.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir, 1873. Rev. M. L. Anderson.
Europe.

913. C. Curreyi Berk. *Fr. Hym. Eur. p.* 663. *C. Hbk. No.* 953.

On twigs of broom.

East. Tweed —— —— Dee Moray ——
West. —— —— —— ——

England. Europe. America.

914. C. muscigena* Fr. *Hym. Eur. p.* 663. *C. Hbk. No.* 949.

On moss. Sept.—Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Reeky Linn. Baldovan. Gardiner. Glamis. J. S.
England. Europe. Tasmania.

915. C. capula Holmsk. *Fr. Hym. Eur. p.* 664. *C. Hbk. No.* 951.

On dead stems of herbaceous plants.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe. America. Tasmania.

916. C. dochmiospora Pers. *Fr. Hym. Eur. p.* 665.
B. & Br. No. 1373. *Peziza villosa* Pers. *C. Hbk. No.* 2055.

Minute, peziza-form, snow-white; *spores oblique, ovate,* rather acute.

On dead herbaceous stems.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

Order V.—CLAVARIEI.

L. SPARASSIS Fr.

917. S. crispa* Wulf. *Fr. Hym. Eur. p.* 666. *C. Hbk. No.* 958.

Beside fir trees and stumps. Aug.—Oct.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

LI. CLAVARIA Linn.

918. C. botrytes Pers. *Fr. Hym. Eur. p.* 667. *C. Hbk. No.* 959.

On beech stumps. Aug.—Oct.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe. America. Australia.

919. C. amethystina* Pers. *Fr. Hym. Eur. p.* 667. *C. Hbk. No.* 960.

In grassy woods and pastures. Aug.—Oct. 1000 ft.

East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

920. C. fastigiata* L. *Fr. Hym. Eur. p.* 667. *C. Hbk. No.* 961.

In pastures. Aug.—Oct. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America.

921. C. muscoides* L. *Hym. Eur. p.* 667. *C. Hbk. No.* 962.
In pastures. Aug.—Oct.
East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America.

922. C. coralloides L. *Fr. Hym. Eur. p.* 668. *C. Hbk. No.* 963.
On the ground in shady places. Aug.—Oct.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe. America.

923. C. cinerea* Bull. *Fr. Hym. Eur. p.* 668. *C. Hbk. No.* 965.
In mixed woods. Aug.—Oct.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe.

924. C. umbrina Berk. *Fr. Hym. Eur. p.* 668. *C. Hbk. No.* 964.
On lawns. Aug.—Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Blair Athole. Miss M'Inroy.
England.

925. C. cristata* Pers. *Fr. Hym. Eur. p.* 668. *C. Hbk. No.* 966.
In mixed woods. Aug.—Oct.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America.

926. C. rugosa* Bull. *Fr. Hym. Eur. p.* 669. *C. Hbk. No.* 967.
In pastures and woods. Aug.—Nov. 1000 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Australia.

927. C. Krombholzii* Fr. *Hym. Eur. p.* 669. *B. & Br. No.* 1586.
Fragile, cæspitose, even, white, sparingly branched; *branches somewhat compressed*, obtuse.
In old pastures. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Castle Park, 1874. Moncreiffe, 1875. J. S.
Europe.

928. C. Kunzei Fr. *Hym. Eur. p.* 669. *C. Hbk. No.* 968.
In woods. Sept.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

929. C. aurea* Schaeff. *Fr. Hym. Eur. p.* 670. *C. Hbk. No.* 969.
In mixed woods. Aug.—Oct.
East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe. America. Australia.

930. C. abietina* Pers. *Fr. Hym. Eur. p.* 671. *C. Hbk. No.* 971.
Under spruce fir. Aug.—Oct.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America. Siberia. Australia.

931. C. crocea* Pers. *Fr. Hym. Eur. p.* 671. *C. Hbk. No.* 973.
On waste ground. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

932. C. grisea* Pers. *Fr. Hym. Eur. p.* 672. *C. Hbk. No.* 974.
In woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— Argyle ——
Europe. America.

933. C. stricta* Pers. *Fr. Hym. Eur. p.* 673. *C. Hbk. No.* 975.
In woods. Aug.—Oct.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Ceylon.

934. C. purpurea Fr. *Hym. Eur. p.* 674. *C. Hbk. No.* 977.
In grassy places. Aug.—Oct.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Rothiemurchus. Rev. J. Keith.
England. Europe.

935. C. rufa Fl. D *Fr. Hym. Eur. p.* 674.

Cæspitose, *rufous*, clubs stuffed, incrassated, *somewhat bifid*, acute.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White. The Burn. Mrs. M'Inroy. Europe.

936. C. rosea Fr. *Hym. Eur. p.* 674. *C. Hbk. No.* 978.

In pastures.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe.

937. C. fusiformis * Sow. *Fr. Hym. Eur. p.* 674. *C. Hbk. No.* 979.

In pastures and moor. Aug.—Oct. 2000 ft.

East. Tweed Forth Tay —— —— ——
West. —— —— Argyle ——

England. Europe. America. Ceylon.

938. C. inaequalis * Fl. D. *Fr. Hym. Eur. p.* 674. *C. Hbk. No.* 981.

In woods and pastures. Aug.—Oct. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——

England. Europe. America. Australia. Ceylon.

Var. **aurantiaca** * Pers. Glamis Castle Park. J. S.

939. C. argillacea * Pers. *Fr. Hym. Eur. p.* 675. *C. Hbk. No.* 982.

In woods and moor. Aug.—Oct. 1600 ft.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. America. Australia. Ceylon.

940. C. vermicularis * Scop. *Fr. Hym. Eur. p.* 675. *C. Hbk. No.* 904.

On lawns. Sept.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe. America.

941. C. fragilis * Holmsk. *Fr. Hym. Eur. p.* 675. *C. Hbk. No.* 985.

In pastures and moor. Aug.—Oct. 1000 ft.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——

England. Europe. America.

942. C. fumosa * Pers. *Fr. Hym. Eur. p.* 676. *C. Hbk. No.* 986.

In pastures. Aug.—Sept.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

943. C. pistillaris * L. *Fr. Hym. Eur. p.* 676. *C. Hbk. No.* 987.

In woods among fern. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Killin, 1876. J. S.

England. Europe. America.

944. C. ligula Schaeff. *Fr. Hym. Eur. p.* 676. *B. & Br. No.* 1820.

Simple, gregarious, *spongy-fleshy*, elongato-clavate, obtuse, *villous at the base*, when young yellowish, when full grown rufescent-pallid.

In woods.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Strachan. J. Sim.

Europe.

945. C. contorta * Holmsk. *Fr. Hym. Eur. p.* 677. *C. Hbk. No.* 988.

On fallen branches. Sept.

East. Tweed —— Tay Dee —— ——
West. —— Clyde —— ——

England. Europe. America.

946. C. fistulosa Var. **Ardenia** Sow. *Fr. Hym. Eur. p.* 677. *C. Hbk. No.* 989.

On branches.

East. —— —— Tay —— —— ——
West. —— —— —— ——

North Esk. Rev. J. Fergusson.

England. Europe.

947. C. juncea * Fr. *Hym. Eur. p.* 677. *C. Hbk. No.* 990.

In woods. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe. Ceylon.

948. C. tuberosa Sow. *B. & Br. No.* 1448. *Calocera, Fr. Hym. Eur. p.* 680.

Simple, yellow, attenuated at the apex, swollen in a bulbous manner at the base, attached by mycelioid fibrils.

Exactly the long-lost plant of Sowerby, which is perhaps too near *C. Ardenia;* and possibly the same may be said of C. juncea, notwithstanding the great difference of size.

On birch. Nov.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Dunphail, 1873. Rev. J. Keith.
England.

949. C. uncialis Grev. *Fr. Hym. Eur. p.* 679. *C. Hbk. No.* 992.
On dead stems of herbaceous plants, &c. May.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——

England. Europe.

LII. CALOCERA Fr.

950. C. viscosa * Pers. *Fr. Hym. Eur. p.* 680. *C. Hbk. No.* 993.
On stumps, chiefly pine. July—Dec. 1700 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross

England. Europe. America.

951. C. cornea * Batsch. *Fr. Hym. Eur. p.* 680. *C. Hbk. No.* 995.
On dead wood. July—Dec.

East. —— —— Tay —— —— ——
West. —— —— —— Ross

England. Europe. America.

LIII. PTERULA Fr.

LIV. TYPHULA Pers.

952. T. erythropus Bolt. *Fr. Hym. Eur. p.* 683. *C. Hbk. No.* 999.
On dead stems of herbaceous plants, &c. Autumn.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

953. T. phacorrhiza* Reich. *Fr. Hym.Eur.p.*683.*C.Hbk.No.*1002.

Among dead grasses, &c. Oct.

East. —— Forth —— Dee Moray ——
West. —— —— —— ——

England. Europe.

954. T. incarnata Lasch. *Fr. Hym.Eur. p.* 683. *C.Hbk.No.* 1001.

On dead herbaceous plants.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

955. T. gyrans Batsch. *Fr. Hym. Eur. p.* 684. *C. Hbk. No.* 1000.

On straw.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

956. T. Grevillei* Fr. *Hym. Eur. p.* 685. *C. Hbk. No.* 1004.

On dead leaves. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den. J. S.
England. Europe. America.

957. T. gracillima White. *B. & Br. No.* 1699.

White; stem very slender, curved, smooth, club elongated.

On various herbaceous plants.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. Buchanan White.

958. T. translucens* B. & Br. *No.* 1589.

Minute, white, pellucid; stem short, thickened upwards; head irregular, somewhat obovate.

Resembling somewhat a prematurely dried *Myxogast*, but a true *Hymenomycete*.

On the ground. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den, 1875. J. S.

LV. PISTILLARIA Fr.

959. P. quisquilaris * Fr. *Hym. Eur. p.* 587. *C. Hbk. No.* 1009.
On fern stems. Sept.—Oct.

East.	——	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe.

960. P. puberula * Berk. *Fr. Hym. Eur. p.* 668. *C. Hbk. No.* 1010.
On dead Pteris. Sept.—Oct.

East.	——	——	Tay	——	——	——
West.	——	——	——	Ross		

England.

Order VI.—TREMELLINEI.

LVI. TREMELLA Dill.

961. T. frondosa Fr. *Hym. Eur. p.* 690. *C. Hbk. No.* 1014.
At roots of trees.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Careston. Rev. M. L. Anderson.
England. Europe.

962. T. foliacea * Pers. *Fr. Hym. Eur. p.* 690. *C. Hbk. No.* 1015.
On stumps, logs, &c. Aug.—Dec.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe. America.

963. T. lutescens * Pers. *Fr. Hym. Eur. p.* 690. *C. Hbk. No.* 1016.
On stumps, &c. Aug.—Feb.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America. Australia.

964. T. mesenterica * Retz. *Fr. Hym. Eur. p.* 691. *C. Hbk. No.* 1017.
On broom and whin. July—Dec. 1700 ft.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	Solway	Clyde	——	Ross		

England. Europe. America. Australia. Teneriffe.

965. T. intumescens Eng. Bot. *Fr. Hym. Eur. p.* 691. *C. Hbk. No.* 1021.
On beech.
East. —— —— —— —— —— ——
West. —— Clyde —— ——
Carmyle. Hooker, Fl. Scot.
England. Europe. America. Australia.

966. T. albida * Huds. *Fr. Hym. Eur. p.* 691. *C. Hbk. No.* 1020.
On dead wood. Sept.—May.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

967. T. viscosa* Berk. *Fr. Hym. Eur. p.* 691. *C. Hbk. No.* 1027.
On dead branches. Jan.—Dec.
East. —— Forth Tay —— Moray ——
West. —— —— Clyde Argyle
England. Europe.

968. T. epigaea * B. & Br. *Fr. Hym. Eur. p.* 692. *C. Hbk. No.* 1028.
On the ground. Aug.—Sept.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England.

969. T. indecorata* Smrft. *Fr. Hym. Eur. p.* 692. *C. Hbk. No.* 1022.
On birch, oak, willow. Oct.—Nov.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
Europe.

970. T. moriformis * Eng. Bot. *Fr. Hym. Eur. p.* 692. *C. Hbk. No.* 1019.
On dead branches. Nov.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Den of Dun. J. S.
England. America. Ceylon.

971. T. tubercularia* Berk. *Fr. Hym. Eur. p.* 692. *C. Hbk. No.* 1024.
On dead branches. Oct.—Dec. 1000 ft.
East. Tweed —— Tay Dee Moray ——
West. Solway Clyde —— ——
England.

972. T. torta * Berk. *Fr. Hym. Eur. p.* 692. *C. Hbk. No.* 1025.
On dead wood. Oct.—Dec.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. America.

973. T. versicolor * Berk. *Fr. Hym. Eur. p.* 693. *C. Hbk. No.* 1026.
On *Corticium*. Nov.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Den of Dun. J. S.
England. Ceylon.

LVII. EXIDIA Fr.

974. E. truncata Fr. *Hym. Eur. p.* 693. *Scot. Nat.* iii. *p.* 20.
Soft, distended with jelly, *disc truncato-plane*, glandulose, *very black*, shining, at length cavernose, *punctato-scabrous beneath;* stem very short.
Does not become swollen when moistened.
On lime. Dec.

East.	——	Forth	——	——	——	——
West.	——	——	——	——		

Yester Gardens. A. D. Innes.
Europe. America.

975. E. recisa * Dittm. *Fr. Hym. Eur. p.* 693. *C. Hbk. No.* 1029.
On dead wood. Sept.—Oct.

East.	Tweed	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

976. E. glandulosa * Bull. *Fr. Hym. Eur. p.* 694. *C. Hbk. No.* 1030.
On oak branches. Sept.—March.

East.	Tweed	Forth	Tay	——	Moray	——
West.	Solway	Clyde	——	——		

England. Europe. America.

977. E. saccharina * Fr. *Hym. Eur. p.* 694. *C. Hbk. No.* 1031.
On larch and Scotch fir. Nov.

East.	Tweed	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

LVIII. HIRNEOLA Fr.

978. H. auricula-Judae L. *Fr. Hym. Eur. p.* 695. *C. Hbk. No.* 1032.

On elder and elm. March—Aug.

East. —— —— Tay Dee —— ——
West. Solway Clyde —— ——
England. Europe. America. Australia.

LIX. SEBACINA Tul.

LX. DITIOLA Fr.

LXI. FEMSJONIA Fr.

LXII. NAEMATELIA Fr.

979. N. encephala * Willd. *Fr. Hym. Eur. p.* 696. *C. Hbk. No.* 1033.

On pine branches, chiefly Scotch fir. Sept.—Feb.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

980. N. virescens * Corda. *Fr. Hym. Eur. p.* 696. *C. Hbk. No.* 1035.

On whin branches. Jan.—Dec.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

LXIII. GUEPINIA Fr.

LXIV. DACRYMYCES Nees.

981. D. deliquescens * Bull. *Fr. Hym. Eur. p.* 698. *C. Hbk. No.* 1038.

On wood, chiefly pine. Jan.—Dec. 2900 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

982. D. stillatus* Nees. *Fr. Hym. Eur. p.* 699. *C. Hbk. No.* 1039.

On pine stumps, &c. Jan.—Dec.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	Argyle	Ross		
	England.	Europe.	America.			

983. D. chrysocomus Bull. *Fr. Hym. Eur. p.* 699. *C. Hbk. No.* 1040.

On fir sticks.

East.	Tweed	——	——	——	Moray	——
West.	——	——	——	——		
	England.	Europe.				

984. D. succineus Fr. *Hym. Eur. p.* 699.

Small, rather thick, gregarious, punctiform, somewhat gelatinous, smooth, *amber*, when moistened externally very pale, the darker disc immarginate.

Mr. Phillips gives the following description of Mr. Keith's specimens, which, he says, exactly accord with those from Sprée in Rabenhorst's "*Fungi Europaei*," *No.* 680.

Minute, cup-shaped, stipitate, pale yellow; stipes short, stout, black; spores cylindrical, ·011 × ·0015 mm.

On pine leaves.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		
	Grantown.	Rev. J. Keith.				
	Europe.					

Of Uncertain Affinity.

LXV. APYRENIUM Fr.

985. A. lignatile Fr. *Hym. Eur. p.* 700. *C. Hbk. No.* 1041.

On dead wood, thorn, &c.

East.	——	——	Tay	——	——	——
West.	——	——	Argyle	——		
	Appin.	Carmichael.	Moncreiffe.	Dr. B. White.		

Considered by some to be a state of *Hypocrea rufa*.

LXVI. HYMENULA Fr.

LXVII. DITIOLA Fr.

LXVIII. EXOBASIDIUM Wor.

Parasitic ; receptacle swollen, crowned by spore-bearing basidia.

986. E. vaccinii * Wor. *Jour. Bot.* 1871. *Scot. Nat.* i. *p.* 160. *B. & Br. No.* 1615.

Receptacle forming irregular gall-like bodies ; spores snow-white.

On *Vaccinium.* Autumn.

Common in the northern districts of Scotland.

England. Europe.

FAMILY II.—GASTEROMYCETES.

Order VII.—HYPOGAEI.

LXIX. OCTAVIANIA Vitt.

LXX. MELANOGASTER Corda.

987. M. ambiguus Tul. *C. Hbk. No.* 1048. *B. & Br. No.* 1032.

Under fir trees.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe.

LXXI. HYDNANGIUM Wallr.

988. H. carneum Wallr. *Tul. Hypo. p.* 75, *t.* 21. *f.* 3.

Subglobose, irregular, smooth, flesh-coloured; cells pale flesh-colour, immutable; basidia prominent; spores spherical, echinulate; spinulus long, slightly coloured; sporidia ·013-·014 mm. diam. *Grevillea*, ii. *p.* 136.

On soil in pots. Aug.—Oct.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——

Glasgow Botanic Garden. Prof. A. Dickson. Moncreiffe. Sir T. Moncreiffe, Bart.
Europe.

LXXII. HYSTERANGIUM Vitt.

LXXIII. RHIZOPOGON Tul.

989. R. rubescens Tul. *C. Hbk. No.* 1052.
In fir woods and mossy ground. June—Oct. 2000 ft.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
Rothiemurchus. Rev. J. Keith. Rannoch. Dr. B. White.
England. Europe. America.

LXXIV. HYMENOGASTER Tul.

990. H. Klotzschii Tul. *C. Hbk. No.* 1053.
Among soil.
East. —— —— —— Dee —— ——
West. —— Clyde —— ——
Glasgow Botanic Garden. Hooker. Craibstone, Aberdeen. Dr. Ogilvie.
Europe.

Order VIII.—PHALLOIDEI.

LXXV. PHALLUS Linn.

991. P. impudicus* Linn. *C. Hbk. No.* 1064.
In woods and about hedges. July—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America. St. Helena.

LXXVI. CYNOPHALLUS Fr.

992. C. caninus Fr. *C. Hbk. No.* 1066.
In woods. Oct.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Keir. Charles A. Patterson.
England. Europe.

LXXVII. CLATHRUS Mich.

Order IX.—TRICHOGASTRES.

LXXVIII. BATARREA Pers.

LXXIX. TULOSTOMA Pers.

LXXX. GEASTER Mich.

993. G. striatus D.C. Var. **minus.** *C. Hbk. No.* 1072.
On sandy ground.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Montrose Links. St. Cyrus. Rev. J. Fergusson.
England. Europe. America.

994. G. Bryantii Berk. *C. Hbk. No.* 1073.
Under trees.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Blervie Hill. Mr. Martin.
England. Europe. Ceylon.

995. G. limbatus Fr. *C. Hbk. No.* 1074. *Sc. Crypt. Fl. t.* 306. *Eng. Fl.* v. *p.* 301.
In woods and hedge banks. Oct.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
Edinburgh, 1782. Sir J. E. Smith. Woodmill, Abdie. J. Heriot.
Europe. America.

LXXXI. BOVISTA Dill.

996. B. nigrescens * Pers. *C. Hbk. No.* 1080.
In pastures. July—Nov. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

997. B. plumbea * Pers. *C. Hbk. No.* 1081.

In pastures. July—Oct.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America. Siberia. Azores.

LXXXII. LYCOPERDON Tourn.

998. L. giganteum * Batsch. *C. Hbk. No.* 1083.

In pastures and hedgerows. May—Nov.

East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— ——

England. Europe. America.

999. L. caelatum * Fr. *C. Hbk. No.* 1084.

In pastures. May—Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Australia.

1000. L. atro-purpureum * Vitt. *C. Hbk. No.* 1085.

In grassy places in woods. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. J. S.
England. Europe. Ceylon. Arctic.

1001. L. pusillum * Fr. *C. Hbk. No.* 1086.

In pastures. Aug.—Nov.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe. Siberia. Australia. Ceylon.

1002. L. saccatum * Vahl. *C. Hbk. No.* 1087.

In shrubbery. May—Nov.

East. —— Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

1003. L. gemmatum * Fr. *C. Hbk. No.* 1088.
In open woods. July—Nov. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America. Siberia. Australia.

1004. L. pyriforme * Schaeff. *C. Hbk. No.* 1089.
About roots of trees, stumps, and on sawdust. Aug.—Nov.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America. Siberia.

LXXXIII. SCLERODERMA Pers.

1005. S. vulgare * Fr. *C. Hbk. No.* 1090.
Borders of woods, avenues, &c. July—Nov.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Australia. St. Helena.

Var. **macrorhizum** Fr. Brodie. Rev. J. Keith.

1006. S. bovista * Fr. *C. Hbk. No.* 1091.
On sandy and dry soil. Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Australia.

1007. S. verrucosum * Pers. *C. Hbk. No.* 1092.
On sandy soil, in thickets, &c. Sept.—Oct.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

LXXXIV. POLYSACCUM D.C.

LXXXV. CENOCOCCUM Fr.

Order X.—MYXOMYCETES.

SERIES I.—AMAUROSPORÆ. *Spores violet, or brownish-violet.*

LXXXVI. PROTODERMA Rtfki.

LXXXVII. CIENKOWSKIA Rtfki.

LXXXVIII. BADHAMIA Berk.

1008. B. hyalina * Pers. *R. Mon.* 140. *C. Brit. Myxo.* 25. *Hbk. No.* 1143.

On decayed wood. Autumn.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——

Appin. Carmichael. Glamis. J. S.
England. Europe. America.

1009. B. utricularis * Bull. *R. Mon.* 142. *C. Brit. Myxo.* 26. *Hbk. No.* 1147.

On rotten wood. Autumn.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

A. **sessilis.** *B.* **splendens.** *C.* **genuina.** *D.* **Schimperiana.** *C. Brit. Myxo.* 26.

These varieties have been grown from one plasmodium by Professor Bayley Balfour.

1010. B. capsulifera * Bull. *R. Mon.* 141. *C. Brit. Myxo.* 26. *B. & Br. No.* 1595.

On dead wood. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1874. J. S.
Europe.

1011. B. rubiginosa Chev. *R. Mon. Supp.* 4. *C. Brit. Myxo.* 29, 82. *Physarum, C. Hbk. No.* 1137.

On trunks among moss.

East. —— —— —— —— Moray ——
West. —— —— Argyle ——

Europe.

LXXXIX. PHYSARUM Pers.

1012. P. Schumacheri * Spr. *R. Mon.* 99. *C. Brit. Myxo.* 11. *Diderma citrinum* Fr. *C. Hbk. No.* 1107. B. & Br. *sub. No.* 1826.

On leaves of *Sphagnum obtusifolium* and rotten pine. Autumn.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——

Inveraray, 1836. Rev. C. Smith. Glamis, 1877. J. S.
Europe. America.

1013. P. leucopus Link. *R. Mon.* 101. *C. Brit. Myxo.* 12. *Didymium leucopus*, Fr. *C. Hbk. No.* 1127.

On dead beech. Autumn.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Foxhall, Edinburgh. Greville, Fl. Ed.
Europe. America.

1014. P. cinereum * Batsch. *R. Mon.* 102. *C. Brit. Myxo.* 13. *Didymium* Fr. *C. Hbk. No.* 1133.

On bark and rotten wood. Autumn. 1400 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——

England. Europe. America. Ceylon.

1015. P. Ditmari* *R. Mon.* 103. *C. Brit. Myxo.* 13,81. *P. theioteum, B. & Br. No.* 1596.

On twigs. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.
Europe.

1016. P. sinuosum Bull. *R. Mon.* 112. *C. Brit. Myxo.* 14. *Angiordium* Grev. *C. Hbk. No.* 1142.

On dead wood, leaves, mosses, &c. Autumn.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh. Greville, Sc. Crypt. Fl.
Europe.

XC. FULIGO Hall.

1017. F. varians* Sommf. *R. Mon.* 134. *O. Brit. Myxo.* 23. *Aethalium septicum* Fr. *C. Hbk. No.* 1101. *Aethalium vaporarium* Fr. *C. Hbk. No.* 1102.

On decayed wood. 1000 ft.

East. Tweed Forth Tay —— Moray ——
West. Solway Clyde —— ——
England. Europe. America. Ceylon.

XCI. CRATERIUM Trent.

1018. C. vulgare* Ditm. *R. Mon.* 118. *C. Brit. Myxo.* 18. *C. pedunculatum* Trent. *C. Hbk. No.* 1149.

On dead sticks. Nov.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1019. C. pyriforme Ditm. *R. Mon.* 120. *C. Brit. Myxo.* 19. *Hbk. No.* 1150.

On bark.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——
Appin, Carmichael. Blair Athole. Miss M'Inroy.
Europe.

1020. C. minutum* Leers. *R. Mon.* 120. *C. Brit. Myxo.* 19. *Hbk. No.* 1151.

On beech leaves, &c. Autumn.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1021. C. leucocephalum* Pers. *R. Mon.* 123. *C. Brit. Myxo.* 19. *Hbk. No.* 1152. *C. leucostictum*, Fr. *B. & Br. No.* 1599.

On dead *Polyporus*, leaves, &c.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1022. C. aureum Schum. *R. Mon.* 125. *C. Brit. Myxo.* 20. *C. mutabile* Fr. *C. Hbk. No.* 1153.

On bark, moss, &c. July—Aug.

East. —— —— —— —— —— ——
West. —— —— —— ——

Appin. Carmichael.
Europe.

1023. C. Friesii R. *Mon.* 122. *C. Brit. Myxo. fig.* 105.

Sporangium pyriform, with a deciduous lid; stem equal in length to the sporangium, uniformly of a rusty-brown colour; columella distinct; spores bright-violet, smooth, ·0085–·01 mm.

On dead leaves of *Luzula sylvatica.* Oct.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Hawthornden, 1878. W. Phillips.
Europe.

XCII. LEOCARPUS Link.

1024. L. fragilis* Dicks. *R. Mon.* 132. *C. Brit. Myxo.* 23. *Diderma vernicosum* Pers. *C. Hbk. No.* 1108.

On grass, leaves, &c. Autumn. 1700 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America.

XCIII. CRATERIACHEA R.

XCIV. TILMADOCHE Fr.

1025. T. nutans* Pers. *R. Mon.* 127. *C. Brit. Myxo.* 21. *Physarum, C. Hbk. No.* 1135. *Physarum bulbiforme* Sch. *C. Hbk. No.* 1136.

On dead wood. Summer—Autumn.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Australia. Ceylon.

1026. T. mutabilis * R. *Mon.* 130. *C. Brit. Myxo.* 22. *Physarum nutans* B. *viride* Fr. γ. *aureum* Fr. *C. Hbk. No.* 1135.

On dead wood. Autumn.

East.	——	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe. America.

XCV. CHONDRIODERMA Rtfki.

1027. C. niveum R. *Mon.* 170. *C. Brit. Myxo.* 37. *B. & Br. No.* 1594.

On dead wood.

East.	——	Forth	——	——	——	——
West.	——	——	——	——		

Linlithgow. J. C. Bauchop.
Europe.

1028. C. deplanatum Fr. *R. Mon.* 170. *C. Brit. Myxo.* 37, 82. *Diderma* Fr. *C. Hbk. No.* 1116.

On dead oak leaves.

East.	——	——	——	——	——	——
West.	——	——	Argyle	——		

Appin. Carmichael.
England. Europe. America. Ceylon.

1029. C. Michelii * Lib. *R.* in *Fckl. Sym. Myc. Nach.* 2, *p.* 74 (1873). *C. Brit. Myxo.* 37. *Didymium hemisphericum* B. *C. Hbk. No.* 1119.

On dead wood. Autumn.

East.	Tweed	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

1030. C. difforme * Pers. *R. Mon.* 177. *C. Brit. Myxo.* 39. *Diderma cyanescens* Fr. *C. Hbk. No.* 1115. *Diderma nitens* Kl. *C. Hbk. No.* 1113. *Physarum album* Fr. *C. Hbk. No.* 1140.

On dead wood, leaves, &c. Autumn.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	Argyle	——		

England. Europe. America.

1031. C. globosum* Pers. *R. Mon.* 180. *C. Brit. Myxo.* 39. *Diderma globosum* Pers. *C. Hbk. No.* 1114.

On dead leaves.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

1032. C. radiatum Linn. *R. Mon.* 182. *C. Brit. Myxo.* 40, 82. *Diderma umbilicatum* Pers. *C. Hbk. No.* 1106. *D. Carmichaelianum* B. *C. Hbk. No.* 1112. *D. Trevelyani* Fr. (probably) *C. Hbk. No.* 1111.

On bark, moss, &c.

East. Tweed Forth Tay —— —— ——
West. —— —— Argyle ——

England. Europe.

1033. C. floriforme Bull. *R. Mon.* 184. *C. Brit. Myxo.* 41. *Diderma floriforme* Pers. *C. Hbk. No.* 1105.

On decaying trunks, mosses, &c.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Swanston Wood, Edinburgh. Greville, Fl. Ed.
England. Europe. America.

1034. C. Œrstedtii R. *Mon.* 184. *C. Brit. Myxo.* 41. *B. & Br. No.* 1593.

On bark with moss.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
Europe.

XCVI. DIDYMIUM Schrad.

1035. D. serpula Fr. *R. Mon.* 151. *C. Brit. Myxo.* 30, 82. *Hbk. No.* 1134.

On leaves. Autumn.

East. —— Forth —— —— —— ——
West. —— —— Argyle ——

England. Europe.

1036. D. farinaceum* Schrad. *R. Mon.* 154. *C. Brit. Myxo.* 31. *Hbk. No.* 1123. *P. nigrum* Fr. *B. & Br. No.* 1598. *D. lobatum* Nees. *C. Hbk. No.* 1129. *D. melanopus* Fr. *C. Hbk. No.* 1118.

On dead wood, leaves, moss, &c. Autumn.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1037. D. microcarpon Fr. *R. Mon.* 157. *C. Brit. Myxo.* 32. *D. nigripes* Fr. *C. Hbk. No.* 1124.

On dead wood.

East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe.

1038. D. physaroides* Pers. *R. Mon.* 153. *C. Brit. Myxo.* 33. *Hbk. No.* 1132.

On stumps, moss, &c. Autumn.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——
England. Europe. America.

1039. D. squamulosum A. & S. *R. Mon.* 159. *C. Brit. Myxo.* 33. *D. leucopus* Fr. *C. Hbk. No.* 1127.

On dead leaves, &c.

East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe. America.

1040. D. pertusum Berk. *C. Brit. Myxo.* 35. *Hbk. No.* 1125.

On dead herbaceous stems.

East. Tweed —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael. Jedburgh. A. Jerdon.

XCVII. LEPIDODERMA De Bary.

XCVIII. DIACHAEA Fr.

1041. D. leucopoda Bull. *R. Mon.* 190. *C. Brit. Myxo.* 44. *D. elegans* Fr. *C. Hbk. No.* 1154.

On leaves, &c.

East. —— —— —— —— —— ——
West. Solway —— —— ——

Dumfriesshire. Professor Bayley Balfour.

XCIX. SPUMARIA Pers.

1042. S. alba * Bull. *R. Mon.* 191. *C. Brit. Myxo.* 45. *Hbk. No.* 1103.

On grass, &c. Summer.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe.

C. ECHINOSTELIUM De Bary.

CI. LAMPRODERMA Rtfki.

1043. L. violacea Fr. *R. Mon.* 204. *C. Brit. Myxo.* 50. *Stemonitis violacea* Pers. *C. Hbk. No.* 1162.

On moss.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Berwick. Johnstone.
England. Europe.

1044. L. arcyrioides * Somm. *R. Mon.* 206. *C. Brit. Myxo.* 50. *Stemonitis arcyrioides* Somm. *C. Hbk. No.* 1163.

On dead leaves. Spring.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe. America.

CII. COMATRICHA Preuss.

1045. C. typhina Roth. *R. Mon.* 198. *C. Brit. Myxo.* 47. *Stemonitis typhoides* D. C. *C. Hbk. No.* 1157.

On rotten stumps.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England. Europe. America. Ceylon.

1046. C. Friesiana* De Bary. *R. Mon.* 199. *C. Brit. Myxo.* 48. *Stemonitis ovata* Pers. *C. Hbk. No.* 1158. *S. obtusata* Fr. *C. Hbk. No.* 1159.

On dead wood. Spring—Autumn.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

CIII. STEMONITIS Gled.

1047. S. fusca* Roth. *R. Mon.* 193. *C. Brit. Myxo.* 46. *Hbk. No.* 1155.

On rotten wood, leaves, &c. Summer—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia. Australia. Ceylon.

1048. S. ferruginea* Ehr. *R. Mon.* 196. *C. Brit. Myxo.* 46. *Hbk. No.* 1156.

On dead wood. Summer.
East. —— Forth Tay —— Moray ——
West. —— —— ——
England. Europe. America. Ceylon.

CIV. AMAUROCHAETE Rtfki.

1049. A. atra * A. & S. *C. Brit. Myxo.* 52. *Reticularia, C. Hbk. No.* 1099.

On pine wood. Spring—Autumn.

East.	——	Forth	Tay	Dee	Moray ——
West.	——	——	——	——	

England. Europe. America.

CV. BREFELDIA Rtfki.

1050. B. maxima * Fr. *R. Mon.* 213. *C. Brit. Myxo.* 53. *Reticularia. C. Hbk. No.* 1097.

On stumps, &c. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Den of Dun. J. S.

England. Europe. America.

CVI. ENERTHENEMA Bowm.

1051. E. Berkeleyana * R. *Mon. Supp.* 29. *C. Brit. Myxo.* 51. *E. elegans. B. & Br. No.* 388 *t.* xi. *fig.* 7. *C. Hbk. No.* 1164 (not Bowm.)

On dead wood. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S.

England. Europe. America.

SERIES II.—LAMPROSPORAE. *Spores diversely coloured, never violet.*

CVII. DICTYOSTELIUM Bref.

CVIII. LICEA Schrad.

CIX. TUBULINA Pers.

1052. T. cylindrica* Bull. *R. Mon.* 220. *C. Brit. Myxo.* 54. *Licea cylindrica*, Fr. *C. Hbk. No.* 1193. *L. fragiformis Nees. C. Hbk. No.* 1194.

On rotten stumps. Autumn.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Ceylon.

CX. LINDBLADIA Fr.

1053. L. effusa Ehr. *R. Mon.* 223. *C. Brit. Myxo.* 55. *B. & Br. No.* 1605.

On sawdust. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Dallas. Rev. J. Keith.
Europe.

CXI. CLATHROPTYCHIUM Rtfki.

1054. C. rugulosum* Wall. *R. Mon.* 225. *C. Brit. Myxo.* 55. *Licea applanata* Berk. *C. Hbk. No.* 1195.

On dead wood. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Den of Dun. J. S.
England. Europe. America.

CXII. ENTERIDIUM Ehr.

1055. E. olivaceum Ehr. *R. Mon.* 227. *C. Brit. Myxo.* 56. *Reticularia olivacea* Fr. *B. & Br. No.* 1592. *R. applanata.* B. & Br. *C. Hbk.* No. 1098.

On decayed fir.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Aboyne, 1870. Rev. M. J. Berkeley. Perth. Dr. B. White.
Europe.

CXIII. DICTYDIUM Schrad.

1056. D. cernuum* Pers. *R. Mon.* 229. *C. Brit. Myxo.* 57. *D. umbilicatum* Schrad. *C. Hbk. No.* 1165.

On decayed wood. August.

East. —— Forth Tay Dee Moray ——
West. —— Clyde Argyle ——

England. Europe. America. Ceylon.

CXIV. HETERODICTYON Rtfki.

CXV. CRIBARIA Pers.

1057. C. rufa* Roth. *R. Mon.* 232. *C. Brit. Myxo.* 58. *C. intermedia Schrad. B. & Br. No.* 1601.

On rotten wood. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1874. J. S.
Europe.

1058. C. aurantiaca* Schrad. *R. Mon.* 233. *C. Brit. Myxo.* 58. *C. intermedia* Berk. *C. Hbk. No.* 1166.

On rotten wood, especially Scotch fir.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

Glamis. J. S. Edinburgh. Professor Bayley Balfour.
England. Europe.

1059. C. intricata* Schrad. *R. Mon.* 237. *C. Brit. Myxo.* 59. *Hbk. No.* 1167.

On decayed fir. Summer—Autumn.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

1060. C. macrocarpa* Schrad. *R. Mon.* 238. *C. Brit. Myxo.* 59. *B. & Br. No.* 1600.

On dead wood. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Cram's Hill, 1875, 1877. J. S.
Europe.

1061. C. argillacea* Pers. *R. Mon.* 238. *C. Brit. Myxo.* 59. *Hbk. No.* 1168.

On decayed Scotch fir.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

1062. C. Balfourii De Bary. Balfour *in litt.*

Intermediate between *Dictydium* and *Cribaria*. The base of the inner spore-wall presents well-marked characters of *Dictydium*, while in other respects it resembles *Cribaria*.

In all probability extended observation will result in the union of these genera.

CXVI. SYPHOPTYCHIUM Rtfki.

CXVII. RETICULARIA Bull.

1063. R. lycoperdon* Bull. *R. Mon.* 240. *C. Brit. Myxo.* 60. *R. umbrina* Fr. *C. Hbk. No.* 1100.

On stumps, especially pine. May—Sept.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America.

CXVIII. PERICHAENA Fr.

1064. P. depressa Lib. *R. Mon.* 292. *C. Brit. Myxo.* 77.

On wood.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh. Professor Bayley Balfour.

England. Europe.

1065. P. corticalis* Batsch. *R. Mon.* 293. *C. Brit. Myxo.* 78. *P. populina.* Fr. *C. Hbk. No.* 1192.

On dead poplar. Autumn.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America. Siberia.

1066. P. fusco-atra * Sibth. *R. Mon.* 294. *C. Brit. Myxo.* 78. *P. abietina* Fr. *C. Hbk. No.* 1191.

On dead fir trunk. Nov.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

1067. P. decipiens * B. & Br. *No.* 1605. *C. Brit. Myxo.* 78.

On fir cones. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White. Glamis. J. S.

CXIX. CORNUVIA Rtfki.

CXX. ARCYRIA Hill.

1068. A. punicea * Pers. *R. Mon.* 268. *C. Brit. Myxo.* 69. *Hbk. No.* 1170.

On rotten wood. Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America. Australia. Ceylon.

1069. A. pomiformis Roth. *R. Mon.* 271. *C. Brit. Myxo.* 70. *A. ochroleuca* Fr. *C. Hbk. No.* 1175.

On decayed wood.
East. —— Forth —— —— —— ——
West. —— Clyde —— ——
England. Europe. America.

1070. A. cinerea * Bull. *R. Mon.* 272. *C. Brit. Myxo.* 71. *Hbk. No.* 1172.

On rotten wood. Autumn.
East. Tweed Forth Tay —— —— ——
West. —— Clyde Argyle ——
England. Europe. America. Ceylon.

1071. A. incarnata * Pers. *R. Mon.* 275. *C. Brit. Myxo.* 71. *Hbk. No.* 1171.

On rotten wood. Autumn.

East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Ceylon.

1072. A. nutans * Bull. *R. Mon.* 277. *C. Brit. Myxo.* 72. *Hbk. No.* 1173.

On rotten wood. Summer—Autumn.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe. America. Ceylon.

1073. A. ferruginea * Sauter. *R. Mon.* 280. *C. Brit. Myxo.* 73. *B. & Br. No.* 1603.

On dead pine. Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. J. S.
England. (Sow. Herb.) Europe.

1074. A. Friesii * B. & Br. *No.* 1602. *C. Brit. Myxo.* 71.

On sawdust. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den, 1875. J. S.

CXXI. LACHNOBOLUS Fr.

CXXII. DERMODIUM Rtfki.

CXXIII. LYCOGALA Mich.

1075. L. epidendrum * Bux. *R. Mon.* 285. *C. Brit. Myxo.* 75. *Hbk. No.* 1095.

On rotten stumps. Spring—Autumn. 1400 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe. America. Siberia. Bermuda. Ceylon.

CXXIV. OLIGONEMA Rtfki.

CXXV. PROTOTRICHIA Rtfki.

CXXVI. TRICHIA Hall.

1076. T. fallax* Pers. *R. Mon.* 243. *C. Brit. Myxo.* 61. *T. cerina Ditm. C. Hbk. No.* 1184.

On rotten wood and sawdust. Autumn.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

1077. T. fragilis* Sow. *R. Mon.* 246. *C. Brit. Myxo.* 62. *T. serotina* Schrad. *C. Hbk. No.* 1181. *T. pyriformis* Fr. *C. Hbk. No.* 1178.

On stumps, rotten wood, &c. Autumn.

East. —— Forth Tay Dee —— ——
West. —— —— Argyle ——
England. Europe. America. Ceylon.

1078. T. varia* Pers. *R. Mon.* 251. *C. Brit. Myxo.* 63. *C. Hbk. No.* 1188. *T. nigripes* Pers. *C. Hbk. No.* 1185.

On rotten wood. Autumn.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

1079. T. chrysosperma* Bull. *R. Mon.* 255. *C. Brit. Myxo.* 64. *T. turbinata* With. *C. Hbk. No.* 1186.

On rotten wood. Spring—Autumn.

East. Tweed Forth Tay Dee Moray ——
West. Solway —— —— ——
England. Europe. America. Ceylon.

CXXVII. HEMIARCYRIA Rtfki.

1080. H. clavata* Pers. *R. Mon.* 264. *C. Brit. Myxo.* 68 *Trichia clavata* P. *C. Hbk. No.* 1183.

On rotten wood, moss, &c.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1081. H. serpula* Scop. *R. Mon.* 266. *C. Brit. Myxo.* 68. *Trichia, C. Hbk. No.* 1189.

On rotten branches, leaves, &c.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

CXXVIII. PHELONITIS Chev.

1082. P. strobilina* P. *C. Hbk. No.* 1197.

Between scales of old fir cones. Autumn.

East. Tweed —— Tay —— Moray ——
West. —— Clyde Argyle —
Europe.

This has been excluded by Rostafinski with a reference to *Pleosporopsis strobilorum* Œrsted. Meanwhile, however, I retain it separately.

Order XI.—NIDULARIACEI.

CXXIX. CYATHUS Pers.

1083. C. striatus Hoffm. *C. Hbk. No.* 1198.

On wood. Summer—Autumn.

East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

1084. C. vernicosus D.C. *C. Hbk. No.* 1199.

In stubble and turnip fields, on straw, &c. 1000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

CXXX. CRUCIBULUM Tul.

1085. C. vulgare* Tul. *C. Hbk. No.* 1200.

On dead branches, straw, sawdust, &c. Autumn.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America. Australia. Teneriffe.

CXXXI. NIDULARIA Tul.

CXXXII. SPHAEROBOLUS Tode.

1086. S. stellatus* Tode. *C. Hbk. No.* 1202.

On living alder, dead fir, sawdust, &c. Autumn. 1000 ft.

East. Tweed Forth Tay Dee Moray ——

West. —— Clyde Argyle Ross

England. Europe. America. Ceylon.

CXXXIII. THELOBOLUS Tode.

CXXXIV. POLYANGIUM Link.

FAMILY III.—CONIOMYCETES.

Order XII.—SPHAERONOMEI.

CXXXV. CONIOTHYRIUM Corda.

CXXXVI. LEPTOSTROMA Fr.

1087. L. caricinum * Fr. *C. Hbk. No.* 1206.
On leaves of *Carices, Luzula sylvatica*, &c. Sept.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1088. L. litigiosum * Desm. *C. Hbk. No.* 1207.
On *Pteris aquilina*. Autumn.
East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

1089. L. spireae Fr. *C. Hbk. No.* 1208.
On dead *Spiræa ulmaria*. Spring.
East. Tweed —— Tay Dee —— ——
West. —— —— —— ——
England. America.

1090. L. glechomatis * B. & Br. *No.* 1449.
Spots tawny; perithecia irregular, minute epiphyllous; spores minute, oblong.
On leaves of *Glechoma hederacea*. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den, 1874. J. S.

CXXXVII. PHOMA Fr.

1091. P. hederae * Desm. *C. Hbk. No.* 1210.

On ivy leaves. Summer—Autumn.
Glamis. J. S.

1092. P. asteriscus Berk. *C. Hbk. No.* 1211.

On dead stems of *Heracleum.*
Jedburgh. A. Jerdon.

1093. P. samarorum Desm. *C. Hbk. No.* 1217.

On fruit of ash. Spring.
Fern, Rev. J. Fergusson.

1094. P. nebulosum Berk. *C. Hbk. No.* 1223.

On dead herbaceous stems.
Edinburgh. Greville. Berwick. Johnstone.

1095. P. longissimum Berk. *C. Hbk. No.* 1224.

On stems of *Umbelliferae.*
Berwick. Johnstone.

CXXXVIII. LEPTOTHYRIUM Kunze.

1096. L. juglandis * Lib. *C. Hbk. No.* 1233.

On walnut leaves. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——			

Taymouth Castle. Glamis. J. S.
England. Europe.

1097. L. fragariae * Lib. *C. Hbk. No.* 1234.

On *Potentilla fragariastrum.* Spring.—Autumn.

East.	——	Forth	Tay	——	——	——
West.	——	Clyde	Argyle	Ross			

England. Europe.

1098. L. ribis* Lib. *C. Hbk. No.* 1235.

On leaves of *Ribes*. Autumn.

East. —— —— Tay —— Moray ——

West. —— Clyde —— Ross

England. Europe. America. Siberia.

1099. L. pictum* B. & Br. *No.* 1450.

Spots rufous, here and there paler, when fertile margined with fuscous colour; perithecia shining, ocellate; spores somewhat cymbaform, curved.

A very pretty and distinct species.

On leaves of *Lonicera*. July.—Nov.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Glamis, 1874. Fascally, 1877. J. S.

CXXXIX. ACTYNOTHYRIUM Kunze.

1100. A. graminis Kze. *C. Hbk. No.* 1236.

On grass. Spring—Autumn.

East. Tweed Forth Tay —— —— ——

West. —— —— —— ——

England. Europe.

CXL. CRYPTOSPORIUM Kunze.

CXLI. SPHAERONEMA Tode.

1101. S. subulatum* Tode. *C. Hbk. No.* 1238.

On hard blackened agarics.

East. —— Forth Tay —— —— ——

West. —— Clyde Argyle ——

England. Europe. America.

CXLII. SPHAEROPSIS Lev.

1102. S. atro-virens Lev. Var. **rusci.** *C. Hbk. No.* 1242.
On dead leaves of *Ruscus aculeatus.*

East. —— Forth —— —— —— ——
West. —— —— —— ——

Slateford. Greville. Fl. Ed.
England. Europe. America.

1103. S. cylindrospora Desm. *C. Hbk. No.* 1243.
On ivy leaves. Spring.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Forfarshire. Gardiner. Fl. Forf.
England. Europe.

1104. S. Ralfsii B. & Br. *C. Hbk. No.* 1244.
On ivy leaves.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.
England.

1105. S. geniculata B. & Br. *C. Hbk. No.* 1247.
On pine leaves.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.
England.

1106. S. epitricha B. & Br. *C. Hbk. No.* 1248.
On *Equisetum.*

East. —— —— —— Dee —— ——
West. —— —— —— ——

Glaslaw. Rev. J. Fergusson.
England.

CXLIII. DOTHIORA Fr.

1107. D. sphaeroides Fr. *C. Hbk. No.* 1255.
On dead branches of ash.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe.

CXLIV. CLINTERIUM Fr.

1108. C. obturatum Fr. *C. Hbk. No.* 1256.

On leaves of ling.

East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe.

CXLV. DIPLODIA Fr.

1109. D. vulgaris Lev. *C. Hbk. No.* 1262.

On twigs of *Prunus padus.*

East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England. Europe. America.

1110. D. herbarum* Lev. *C. Hbk. No.* 1263.

On stems of herbaceous plants. Summer—Autumn.

East. —— —— Tay —— ——
West. —— —— —— ——
Perth. Dr. B. White. Glamis. J. S.
England. Europe.

1111. D. consors* B. & Br. *C. Hbk. No.* 1272.

On laurel leaves. July.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England.

1112. D. arbuticola Fr. *C. Hbk. No.* 1273.

On leaves of *Arbutus uva-ursi.*
Scotland. Dr. M. C. Cooke.
Europe.

CXLVI. HENDERSONIA Berk.

1113. H. elegans * Berk. *C. Hbk. No.* 1275.

On dead reed. Spring—Summer.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England.

1114. H. oreades Dur. & Mont. *C. Hbk. No.* 1281.

On oak leaves. Oct.

East. —— —— —— Dee —— ——
West. —— —— —— ——

New Pitsligo. Rev. J. Fergusson.
England. Europe.

1115. H. exigua Cooke. *Grevillea*, iii. *p.* 178.

Perithecia scattered, minute, not more than ·085 mm. in diameter, punctiform, membranaceous, blackish brown, becoming flattened. Spores small, ·01–·012 mm. long, elliptic, bi-septate, pale brown. *Fungi Brit.* ii. 24, *with fig.*

On smooth bark.
Scotland. Dr. M. C. Cooke.

1116. H. arundinacea Desm. *Sacc. Michelia*, ii. *p.* 211.

Ascophore.—*Sphaeria arundinacea* Sow. *C. Hbk. No.* 2623.

Macrostylospores. Perithecia similar to the ascophore, containing cylindrical, hyaline spores which are rounded at either end, 60–70 mm. long by 7 mk. wide, 10–12 septate, with 11–13 nuclei.

On dead *Arundo* stems.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Kinrara. Rev. J. Keith.
Europe.

CXLVII. DILOSOPHOSPHORA Desm.

1117. D. graminis Desm. *C. Hbk. No.* 1284.

On *Holcus* leaves.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.
England. Europe.

CXLVIII. DARLUCA Cast.

1118. D. filum Cast. *C. Hbk. No.* 1285.

On *Uromyces apiculosa* and *Uredo fallens.*

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Ceylon.

CXLIX. VERMICULARIA Tode.

1119. V. dematium Fr. *C. Hbk. No.* 1288.

On dead herbaceous stems.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
England. Europe. America.

1120. V. trichella Grev. *C. Hbk. No.* 1289.

On dead leaves of ivy, &c. Autumn—Spring.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Foxhall. Greville. Sc. Crypt. Fl.
Europe.

1121. V. atramentaria B. & Br. *C. Hbk. No.* 1290.

On decayed potato stems.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
England. America.

CL. DISCOSIA Lib.

1122. D. alnea Lib. *C. Hbk. No.* 1292.

On dead leaves.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

CLI. PILIDIUM Kunze.

1123. P. acerinum Kze. *C. Hbk. No.* 1293.
On dead leaves of sycamore.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe.

1124. P. carbonaceum Lib. *C. Hbk. No.* 1294.
On willow branches.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe.

CLII. MELASMIA Lev.

CLIII. PIGGOTIA B. & Br.

1125. P. astroidea * B. & Br. *No.* 1493. *C. Hbk. No.* 1296.
On elm leaves. June.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England.

CLIV. SEPTORIA Fr.

1126. S. ulmi * Kunze. *C. Hbk. No.* 1297.
On elm leaves. Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America.

1127. S. heraclei * Fckl. *C. Hbk. No.* 1298.
On leaves of *Heracleum*. Summer. 1200 ft.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1128. S. oxyacanthae* Kunze. *C. Hbk. No.* 1299.
On leaves of hawthorn. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

1129. S. aceris* B. & Br. *C. Hbk. No.* 1300.
On leaves of sycamore. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

1130. S. aegopodii* Desm. *C. Hbk. No.* 1302.
On leaves of *Aegopodium*. Summer.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

1131. S. lepidii* Desm. *C. Hbk. No.* 1303.
On *Lepidium Smithii*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Montrose Basin. J. S.
England. Europe. Siberia.

1132. S. hippocastani* B. & Br. *C. Hbk. No.* 1305.
On leaves of horse-chestnut. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Dun. J. S.
England.

1133. S. polygonorum* Desm. *C. Hbk. No.* 1310.
On leaves of *Polygonum*. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America. Siberia.

1134. S. heterochroa* Desm. *C. Hbk. No.* 1313.
On leaves of mallow, &c. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Findhaven. Rev. J. Fergusson.
England. Europe.

1135. S. stemmatea* Berk. *C. Hbk. No.* 1314.
On leaves of *Vaccinium vitis-idaea*. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	Ross		

England. Europe. Siberia.

1136. S. graminum* Desm. *C. Hbk. No.* 1315.
On grass.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.
England. Europe. America.

1137. S. hederae* Desm. *C. Hbk. No.* 1316.
On leaves of ivy. Summer.

East.	Tweed	——	Tay	——	Moray	——
West.	Solway	Clyde	——	Ross		

England. Europe.

1138. S. thecicola* B. & Br. *No.* 424. *C. Hbk. No.* 1318.
On thecae of *Polytrichum piliferum*.

East.	——	——	——	Dee	——	——
West.	——	——	——	——		

Aberdeen. Professor Dickie.

1139. S. viburni* West. *C. Hbk. No.* 1321.
On leaves of *Viburnum*. Summer.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S.
England. Europe.

1140. S. unedinis* Rob. *C. Hbk. No.* 1322.
On leaves of *Arbutus*. Summer.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S.
England. Europe.

1141. S. hydrocotyles* Desm. *C. Hbk. No.* 1323.
On *Hydrocotyle*. Summer.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Rannoch. Dr. White.
England. Europe.

1142. S. ficariae Desm. *C. Hbk. No.* 1324.
On leaves of *Ranunculus ficaria.* Summer.
East. —— —— Tay Dee —— ——
West. —— Clyde —— ——
England. Europe.

1143. S. clematidis * Rob. *C. Hbk. No.* 1326.
On leaves of *Clematis vitalba.* Summer—Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1144. S. epilobii West. *C. Hbk. No.* 1327.
On leaves of *Epilobium.* Summer. 1600 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Ben Dirrochie. Rev. J. Fergusson.
England. Europe.

1145. S. rosarum West. *C. Hbk. No.* 1328.
On living leaves of roses. Summer.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe.

1146. S. sorbi * Lasch. *C. Hbk. No.* 1330.
On leaves of mountain ash. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— Ross
England. Europe.

1147. S. fraxini * Desm. *C. Hbk. No.* 1331.
On leaves of ash. Summer.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1148. S. scabiosaecola * Desm. *C. Hbk. No.* 1333.
On leaves of *Scabiosa.* Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glen Lochay. J. S.
England. Europe. Siberia.

1149. S. gei* Desm. *C. Hbk. No.* 1335.

On leaves of *Geum*. Summer.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe.

1150. S. castanaecola Desm. *C. Hbk. No.* 1337.

On chestnut leaves. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
England. Europe.

1151. S. ribis* Desm. *C. Hbk. No.* 1338.

On leaves of black currant.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe.

1152. S. urticae* Desm. *C. Hbk. No.* 1341.

On leaves of nettle. Summer—Autumn.

East. —— —— Tay Dee —— ——
West. —— Clyde —— Ross

England. Europe.

1153. S. virgaureae Desm. *C. Hbk. No.* 1343.

On leaves of *Solidago virgaurea*.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Gannachy. Rev. M. L. Anderson.
England. Europe.

1154. S. hyperici* Desm. *B. & Br. No.* 1460. *Grevillea*, iii. *p.* 177.

Epiphyllous; spots suborbicular, oblong or indeterminate, rufous brown, with a yellowish margin; perithecia minute, innate, rather prominent; mouth orbicular, broadly open; tendrils delicate, pale red; spores linear, somewhat curved with 8–16 nuclei. Spores (·002 in.) ·05 mm. long. *Desm. Ann. Sc. Nat.*, 1842, xvii. *p.* 110.

On leaves of *Hypericum*. June—July.

East. —— —— Tay —— —— ——
West. —— —— —— Ross

Glamis, 1874. Loch Maree, 1878. J. S.

1155. S. stachydis* Desm. *B. & Br. No.* 1461. *Grevillea*, iii. *p.* 177.

Spots amphigenous, subolivaceous, then pallid brown or bleached, irregular, girt by the veins, scattered or confluent; perithecia epiphyllous, very minute, brownish-black, pierced; spores linear, delicate, curved or flexuous. Spores slender, thread-like (·001–·0015 in.) ·025–·03 mm. *Desm. Ann. Sc. Nat.*, 1847, viii. *p.* 19.

On leaves of *Stachys silvatica*. Summer—Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

CLV. PHYLLOSTICTA Pers.

1156. P. vulgaris var. **lonicerae*** Desm. *C. Hbk. No.* 1353.

On leaves of honeysuckle.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe.

CLVI. CHEILARIA Libert.

CLVII. ASCHOCHYTA Libert.

1157. A. pisi* Lib. *C. Hbk. No.* 1355.

On leaves of pea. Summer.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

1158. A. dianthi Berk. *C. Hbk. No.* 1357.

On leaves of *Dianthus*. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
England. Europe.

1159. A. metulaespora * B. & Br. *No.* 1730.

Spots orbicular, brown; perithecia minute, pallid; spores metulæform. The shape of the spores is singular, like that of the pieces of wood with which boys play, called tipcats (bâtonnets, Gall.).

On living leaves of ash. July.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den, 1877. J. S.

CLVIII. CYSTOTRICHA B. & Br.

CLIX. NEOTTISPORA Desm.

CLX. EXCIPULA Fr.

1160. E. strigosa Fr. *C. Hbk. No.* 1361.

On culms and leaves of grass.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——

England. Europe. America.

CLXI. DINEMASPORIUM Lev.

1161. D. graminum * Lev. *C. Hbk. No.* 1365.

On leaves of grass. Summer.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1162. D. hispidulum Schrad. *Peziza hispidula, C. Hbk. No.* 2044.

On dead wood.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.
Europe.

CLXII. MYXORMIA B. & Br.

CLXIII. PROSTHEMIUM Kunze.

1163. P. stellare Reiss. *C. Hbk. No.* 1367.

On alder.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.
England. Europe.

CLXIV. ASTEROMA D. C.

1164. A. ulmi Klotzsch. *C. Hbk. No.* 1369.

On living elm leaves. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Scotland. Klotsch, in Hook. Herb. Sanquhar. Rev. J. Keith.

1165. A. prunellae Purt. *C. Hbk. No.* 1370.

On leaves of *Prunella*. Summer.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Oathlaw. Rev. J. Fergusson.
England. Europe.

1166. A. padi Grev. *C. Hbk. No.* 1371.

On leaves of *Prunus padus*.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

1167. A. rosae D. C. *C. Hbk. No.* 1372.

On living leaves of roses. Summer—Autumn.

East. —— —— Tay —— Moray——
West. —— —— —— ——

England. Europe. America.

CLXV. RABENHORSTIA Fr.

1168. R. rudis Fr. *C. Hbk. No.* 1373.
On dead branches of Laburnum.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe.

1169. R. tiliae Fr. *C. Hbk. No.* 1374.
On branches of lime.
East. Tweed —— —— —— ——
West. —— —— —— ——
Berwick. Johnstone. Fl. Berw.
England. Europe.

CLXVI. MICROPERA Lev.

CLXVII. DISCELLA B. & Br.

1170. D. carbonacea B. & Br. *C. Hbk. No.* 1376.
On dead beech and willow.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

1171. D. microsperma B. & Br. *C. Hbk. No.* 1379.
On dead twigs of willow.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.

CLXVIII. PHLYCTAENA Desm.

1172. P. Johnstonii B. & Br. *C. Hbk. No.* 1382.
On dead *Senecio Jacoboea.*
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Berwick. Johnstone. Fl. Berw.

CLXIX. CEUTHOSPORA Fr.

1173. C. lauri * Grev. *C. Hbk. No.* 1383.

On dead leaves of Laurel. Jan.—Dec.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

CLXX. ERIOSPORA B. & Br.

Order XIII. MELANCONEI.

CLXXI. MELANCONIUM Link.

1174. M. bicolor * Nees. *C. Hbk. No.* 1385.

On dead leaves of birch. Spring.

East. Tweed —— Tay —— —— ——
West. —— —— Argyle ——
England. Europe. America.

1175. M. magnum Berk. *C. Hbk. No.* 1386.

On dead branches of hornbeam, sycamore, &c.

East. —— Forth —— —— Moray ——
West. —— —— —— ——
Edinburgh. Greville. Brodie. Edinburgh Herbarium.
England. Europe. America.

CLXXII. STEGONOSPORIUM Corda.

1176. S. cellulosum Corda. *C. Hbk. No.* 1388.

On dead branch.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe.

CLXXIII. STILBOSPHORA Pers.

1177. S. ovata Pers. *C. Hbk. No.* 1389.
On dead twigs.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe. America.

CLXXIV. ASTEROSPORIUM Kunze.

1178. A. Hoffmanni M. & N. *C. Hbk. No.* 1392.
On dead twigs of beech.
East. Tweed —— —— —— —— ——
West. —— —— ——
Jedburgh. A. Jerdon.
England. Europe. America.

CLXXV. CORYNEUM Kunze.

1179. C. disciforme Kze. *C. Hbk. No.* 1395.
On dead branches of birch.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
Europe.

1180. C. microstictum * B. & Br. *C. Hbk. No.* 1398.
On dead rose hips. Spring—Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

CLXXVI. PESTALOZZIA De Not.

CLXXVII. CHEIROSPORA Fr.

CLXXVIII. NEMASPORA Pers.

1181. N. crocea Pers. *C. Hbk. No.* 1405.

On beech. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dupplin Castle. Dr. M. C. Cooke.
England. Europe. America.

1182. N. rosae Desm. *C. Hbk. No.* 1406.

On rose, oak, &c.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

CLXXIX. MYXOSPORIUM De Not.

CLXXX. GLAEOSPORIUM Mont.

1183. G. concentricum B. & Br. *No.* 1458. *C. Hbk. No.* 1408.

On cabbage leaves.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh. Greville, Sc. Crypt. Fl.

1184. G. fructigenum Berk. *C. Hbk. No.* 1411.

On apples.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White
England.

1185. G. violae* B. & Br. *No.* 1703.

Spots pallid, at length white; pustules very few or solitary; spores orange, effused over the matrix.
The effused spores, especially when developed on large white spots, make it a very striking species.

On leaves of *Viola odorata.* June.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Kirkland, Fifeshire, 1877. J. S.

CLXXXI. CYLINDROSPORIUM.

1186. C. ficariae * Berk. *B. & Br. No.* 1458. *Glœosporium. C. Hbk. No.* 1413.

A true *Cylindrosporium;* the spores are not contained in a perithecium.

On leaves of *Ranunculus ficaria.* Summer.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England.

1187. C. longipes Preuss. in Sturm. iii. *t.* 25.

Effused; flocci simple, septate, brown, pellucid, apex catenate, simple or dichotomous, white, fragile, breaking up into cylindrical joints.

The base of the stem is dark, the upper part hyaline, and breaking up into cylindrical spores, absolutely truncate at either extremity. *B. & Br. No.* 1705. *Grevillea,* vi. *p.* 126.

On walnut shell. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Moncreiffe. Dr. B. White.
Europe.

1188. C. rhabdospora * B. & Br. *No.* 1458.

Spots amphigenous, orbicular, brown; spores white, forming little radiating fascicles, oblong, triseptate, obtuse, slightly hollowed out at the sides, ·0008–·002 in. or more long. Sometimes a second is developed at the tip of the first.

On leaves of *Plantago.* July.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den, 1874. J. S.

1189. C. niveum B. & Br. *No.* 1459.

Spots margined with brown, numerous, crowded, one or two lines across, often confluent; spores snow-white, oblong, uniseptate, shortly pedicellate, when fully grown about ·002 inch long.

On *Caltha palustris.*

East. —— —— —— Dee —— ——
West. —— —— —— ——

New Pitsligo. Rev. J. Fergusson.

1190. C. senecionis B. & Br. *No.* 1613.

Forming white conspicuous irregular patches; flocci flexuose, slender; spores cylindrical, springing out of the white patches, variable in length ·0003–·0006 inch or more long.

On leaves of *Senecio vulgaris*.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.

Order XIV.—TORULACEI.

CLXXXII. TORULA Pers.

1191. T. monilioides Corda. *C. Hbk. No.* 1414.

On sticks.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.
Europe.

1192. T. ovalispora Berk. *C. Hbk. No.* 1415.

On fallen branches.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sanquhar. Rev. J. Keith.
England. Europe.

1193. T. pulveracea * Corda. *C. Hbk. No.* 1417.

On stumps. Autumn—Spring.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1194. T. hysterioides * Corda. *C. Hbk. No.* 1421.

On dead wood. Spring.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

1195. T. cylindrica Berk. *C. Hbk. No.* 1422.

On sticks.

East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.

1196. T. herbarum * Link. *C. Hbk. No.* 1423.

On dead herbaceous stems.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1197. T. sporendonema B. & Br. *C. Hbk. No.* 1426.

On cheese.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England. Europe.

1198. T. ulmicola Rbh. *D.C. Fl. p.* 35.

Thinly effused, black; spores elongated, rounded at the ends, smoky-brown.

On elm bark. June.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres, 1874. Rev. J. Keith.
Europe.

1199. T. splendens Cooke. *Grevillea*, iii. *p.* 178. *Pl.* 48. *fig.* 1.

Effused in dense black velvety patches. Flocci attenuated upwards, sometimes with one or two patent branches, joints subglobose, compressed, not readily separating, dark brown. Flocci fully ·25 mm. long; the joints ·01 mm. diam. towards the base, but smaller above.

On oak bark.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Drumduan. Rev. J. Keith.

CLXXXIII. SPEIRA Corda.

1200. S. toruloides Corda. *C. Hbk. No.* 1427.
On sloe stick.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe.

CLXXXIV. BACTRIDIUM Kunze.

1201. B. acutum B. & B. White. *Scot. Nat.* iv. *p.* 162. *Pl.* ii. *f.* 4. *B. & Br. No.* 1704.
White, parasitic; spores attenuated downwards, acute at apex, 1–3 septate, penultimate joint swollen.
Distinguished from *B. helvellæ* by its constantly very acute apex and attenuated base.
On the hymenium of *Peziza cochleata*. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glen Tilt, 1877. Dr. B. White.

CLXXXV. HELICOSPORIUM Nees.

CLXXXVI. BISPORA Corda.

1202. B. monilioides Corda. *C. Hbk. No.* 1433.
On stumps.
East. Tweed Forth Tay —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

CLXXXVII. SEPTONEMA Corda.

1203. S. elongatispora Preuss. *C. Hbk. No.* 1436.
On *Geranium sylvaticum* and nettle. Autumn. 1000 ft.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

CLXXXVIII. SPOROCHISMA B. & Br.

1204. S. mirabile B. & Br. *C. Hbk. No.* 1438.
On beech and walnut.

East.	——	Forth	Tay	——	——	——
West.	——	——	——	——		

England.

CLXXXIX. SPORIDESMIUM Link.

1205. S. alternariae Cooke. *Hbk. No.* 1440.
On wall paper.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.
England.

1206. S. lepraria B. & Br. *C. Hbk. No.* 1445.
On planks.
Scotland. Dr. M. C. Cooke.
England. America.

1207. S. triglochinis B. & Br. *No.* 1607. *Pl.* x. *f.* 4.
Sori punctiform, springing from a cellular base; spores when young obovate, with a short stem thickened upwards, then subglobose, obliquely divided, at length oblong fenestrate. Sori bright brown ·006–·008 inch in diam.; spores ·0003–·0007 inch.
On *Triglochin palustre.* March.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Rannoch, 1875. Dr. B. White.

CXC. CONIOTHECIUM Corda.

CXCI. DICTYOSPORIUM Corda.

CXCII. TETRAPLOA B. & Br.

CXCIII. ECHINOBOTRYUM Corda.

CXCIV. GYMNOSPORIUM Corda.

CXCV. ACALYPTOSPORA Desm.

Order XV.—PUCCINIAEI.

CXCVI. XENDOCHUS Schl.

1208. X. carbonarius Schl. *C. Hbk. No.* 1455.
On living Burnet leaves.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Melrose. Dr. M. C. Cooke.
England. Europe.

CXCVII. PHRAGMIDIUM Link.

1209. P. mucronatum * Fr. *C. Hbk. No.* 1456.
On rose leaves. Summer—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America. India.

1210. P. bulbosum * Schl. *C. Hbk. No.* 1458.
On bramble leaves. Autumn.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. Himalayas.

1211. P. gracile * Berk. *C. Hbk. No.* 1459.
On raspberry leaves. Summer—Autumn. 2500 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

1212. P. obtusum * Fr. *C. Hbk. No.* 1460.
On leaves of *Potentilla fragariastrum*. Summer.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. Siberia.

CXCVIII. TRIPHRAGMIUM Link.

1213. T. ulmariae* Link. *C. Hbk. No.* 1461.
On leaves of *Spiræa ulmaria.* Summer—Autumn.
East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. Siberia.

CXCIX. PUCCINIA Pers.

1214. P. graminis* Pers. *C. Hbk. No.* 1462.
On leaves of grass and corn. Summer—Autumn.
East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— Ross
England. Europe. America. Siberia. Ceylon.

1215. P. arundinacea* Hedw. *C. Hbk. No.* 1463.
On reed. Summer—Autumn.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. Siberia.

1216. P. striola Link. *C. Hbk. No.* 1464.
On *Carices.* Summer—Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1217. P. coronata Corda. *C. Hbk. No.* 1465.
On grass. Summer—Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Menmuir. Rev. M. L. Anderson.
England. Europe.

1218. P. moliniae Tul. *B. & Br. No.* 1608. *C. Micro. Fungi, p.* 203.
Sori punctiform, oblong, linear, or very long, solitary, scattered, or partly confluent, dark brown; spores broadly elliptical, obtuse, even, on long pedicels, cells nearly equal.
On *Molinia cærulea.* Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe.

1219. P. luzulae* Lib. *C. Micro. Fungi, p.* 203.

Spots purplish; sori scattered, somewhat rounded, girt by the ruptured epidermis, amphigenous; spores brown, elougated, lower cell pyriform, upper cell subglobose, quadrate, or irregular, with a thickened epispore; pedicels long, hyaline. The protospores are *Trichobasis oblongata.*

On leaves of *Luzula.* Autumn.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Glamis. J. S. Aviemore. Rev. J. Keith.
England. Europe.

1220. P. asparagi D. C. *C. Hbk. No.* 1467.

On dead stems of *Asparagus.* Autumn.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh. Greville, Fl. Ed.
England. Europe.

1221. P. polygonorum* Link. *C. Hbk. No.* 1468.

On leaves of *Polygonum.* Summer—Autumn.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Siberia.

1222. P. vaginalium* Link. *C. Hbk. No.* 1469.

On leaves of *Polygonum aviculare.* Autumn.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

1223. P. bistortae D. C. *C. Micro. Fungi, p.* 204.

Spots none; sori scattered, minute, numerous, rufous, hypophyllous, suborbicular; pseudo-spores ovoid or oblong, obtuse, rounded, bright brown, stem very short.

On leaves of *Polygonum viviparum.* Autumn. 1800 ft.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

Mar Lodge, 1822. Greville. Glenshee. Dr. B. White.
Morayshire. Rev. J. Keith.
England. Europe. Siberia.

1224. P. primulae Grev. *C. Hbk. No.* 1471.
On leaves of primroses. Summer—Autumn.
East. —— Forth Tay —— —— ——
West. —— —— Argyle ——
England.

1225. P. veronicarum D. C. *C. Hbk. No.* 1472.
On leaves of *Veronica alpina*. Summer. 3000 ft.
East. Tweed —— Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

1226. P. glechomatis* D. C. *C. Hbk. No.* 1473.
On leaves of *Glechoma hederacea*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1227. P. menthae* Pers. *C. Hbk. No.* 1474.
On leaves of mint. Summer—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

1228. P. scorodoniae* Link. *C. Hbk. No.* 1475.
On leaves of *Teucrium scorodonia*. Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

1229. P. scrophulariae Lib. *C. Hbk. No.* 1476.
On leaves of *Scrophularia*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Fern. Rev. M. L. Anderson. Monikie. Rev. J. Fergusson.
England. Europe.

1230. P. betonicae D. C. *C. Hbk. No.* 1477.
On leaves of *Stachys betonica*. Summer.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh. Greville, Fl. Ed.
England. Europe.

1231. P. vincae Berk. *C. Hbk. No.* 1478.
On leaves of *Vinca*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Maulesden. Rev. J. Fergusson.
England. Europe.

1232. P. campanulae * Carm. *C. Hbk. No.* 1479.
On leaves of *Campanulæ*. Summer.—Autumn.
East. —— —— Tay Dee —— ——
West. —— —— Argyle ——
England. Europe.

1233. P. clandestina Carm. *C. Hbk. No.* 1480.
On *Scabiosa succisa*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— Argyle ——
England.

1234. P. sparsa Cooke. *C. Hbk. No.* 1481.
On *Tragopogon*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
East Haven. Rev. J. Fergusson.
England.

1235. P. compositarum * Schl. *C. Hbk. No.* 1482.
On leaves of *Compositæ*. Summer—Autumn. 1000 ft.
East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— ——
England. Europe. America.

1236. P. discoidearum Link. *C. Hbk. No.* 1483.
On *Tanacetum vulgare*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Charleton. Rev. J. Fergusson.
England. Europe.

1237. P. syngenesiarum * Link. *C. Hbk. No.* 1484.
On leaves of thistles. Summer—Autumn. 1000 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

1238. P. glomerata * Grev. *C. Hbk. No.* 1485.

On *Senecio Jacobæa*. Summer—Autumn.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England.

1239. P. virgaureae * Lib. *C. Hbk. No.* 1486.

On leaves of *Solidago virgaurea*. Autumn. 2700 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1240. P. cirsii Lasch. *C. Micro. Fungi, p.* 206.

Protospores : sori scattered, pulverulent, brown ; spores globose, cinnamon-brown, granular, at length delicately roughened. Brand-spores : sori scattered, dark brown, epiphyllous, encircled by the ruptured cuticle ; spores shortly pedicellate, obtuse, dark brown.

On leaves of *Cirsium*. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Dupplin Castle. Dr. M. C. Cooke.
Europe. Siberia.

1241. P. variabilis * Grev. *C. Hbk. No.* 1487.

On leaves of dandelion. Summer. 1500 ft.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1242. P. Andersoni * B. & Br. *No.* 1464. *C. Micro. Fungi, p.* 206.

Spots epiphyllous, orbicular, surrounded by a brown border, with a central patch indicating the position of the sori ; sori hypophyllous, minute, crowded, almost concealed by the pubescence of the leaf ; pseudo-spores oblong, constricted in the centre, obtusely apiculate.

The spores are very like those of *P. discoideum* as figured by Corda.

On leaves of *Cnicus heterophyllus*. Summer—Autumn. 1800 ft.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
Originally found in Den of Airlie by Gardiner. Falls of Noran, Glen Ogle, 1874. Rev. M. L. Anderson. Glen Tilt. Dr. B. White. J. S. Forres. Rev. J. Keith

1243. P. tripolii Wallr. *B. & Br. No.* 1467. *C. Micro. Fungi, p.* 207.

Sori large, compact; pseudo-spores elongated, truncate at the apex, bi-nodulose or with a thick mammæform appendage.

On leaves of *Aster tripolium.* Autumn.

East. —— —— —— Dee —— ——
West. —— —— —— ——

New Pitsligo. Rev. J. Fergusson.
England.

1244. P. senecionis Lib. *B. & Br. No.* 1466. *C. Micro. Fungi, p.* 207.

Sori gregarious, minute, punctiform, convex, covered with the epidermis, which is depressed in the centre and perforated, nearly black; pseudo-spores subovoid, rather small, somewhat apiculate, brown, smooth peduncles very short.

On *Senecio aquatica.* Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Fern, Noran Woods. Rev. M. L. Anderson.
Europe.

1245. P. valantiae Pers. *C. Hbk. No.* 1488.

On *Galium cruciatum.* Autumn.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

1246. P. galiorum* Link. *C. Hbk. No.* 1489.

On leaves of *Galium* and *Asperula.* Summer—Autumn.

1000 ft.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe.

1247. P. acuminata Fckl. *C. Micro. Fungi, p.* 208.

Sori scattered, erumpent, hemispherical, dark brown; pseudo-spores oblong, acuminate, pale brown, with a short coloured peduncle.

On *Galium saxatile.* Summer. 1000 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.
Europe.

1248. P. umbelliferarum * D. C. *C. Hbk. No.* 1491.
On leaves of *Umbelliferæ*. Summer.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

1249. P. heraclei Grev. *C. Hbk. No.* 1492.
On leaves of *Heracleum*. Summer—Autumn.
East. —— Forth Tay Dee Moray ——
West. —— —— Argyle ——
England.

1250. P. apii Corda. *C. Hbk. No.* 1493.
On leaves of celery.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Balnamoon. Rev. M. L. Anderson.
England. Europe.

1251. P. aegopodii Link. *C. Hbk. No.* 1494.
On leaves of *Aegopodium*. Summer.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe.

1252. P. saniculae Grev. *C. Hbk. No.* 1495.
On leaves of *Sanicula europæa*. Summer—Autumn.
East. Tweed Forth Tay —— —— ——
West. —— —— Argyle ——
England. America.

1253. P. conii Fckl. *P. bullaria* Link. *C. Hbk. No.* 1496.
On stems of *Conium maculatum* and other *Umbelliferæ*. Autumn.
East. Tweed —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

1254. P. anemones * Pers. *C. Hbk. No.* 1498.
On leaves of *Anemone nemorosa*. Spring—Summer.
East. —— —— Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America. Siberia.

1255. P. adoxae * D. C. *C. Micro. Fungi, p.* 209.

Spots none; sori orbicular, scattered or crowded, and confluent, girt by the ruptured epidermis; pseudo-spores elliptic, cells equal, obtusely triangular, slightly constricted, smooth, on rather long peduncles.

On *Adoxa moschatellina.* Summer

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den. J. S.
England. Europe.

1256. P. saxifragarum * Schl. *C. Hbk. No.* 1506.

On leaves of *Saxifraga* and *Adoxa.* Summer. 3000 ft.

East. Tweed Forth Tay —— Moray ——
West. Solway Clyde —— ——

England. Europe. America.

1257. P. chrysosplenii * Grev. *C. Hbk. No.* 1507.

On leaves of *Chrysosplenium.* Spring—Autumn. 1500 ft.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

1258. P. calthae Link. *C. Hbk. No.* 1499.

On leaves of *Caltha palustris.* Spring. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

1259. P. violarum * Link. *C. Hbk. No.* 1502.

On leaves of violet. Summer—Autumn. 1500 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross

England. Europe.

1260. P. Fergussoni B. & Br. *No.* 1465. *C. Micro. Fungi, p.* 210.

Spots pallid; sori minute, crowded in orbicular clusters; pseudo-spores oblong, obtusely apiculate.

This is very different from P. violarum, not only in the minute crowded sori, but in the elongated spores.

On leaves of *Viola palustris.* Summer. 3000 ft.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

New Pitsligo. Rev. J. Fergusson.
North Wales.

1261. P. lychnidearum* Link. *C. Hbk. No.* 1503.
On leaves of *Lychnis*, &c. Autumn. 1000 ft.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. Siberia.

1262. P. rhodiolae B. & Br. *C. Hbk. No.* 1505.
On leaves of *Sedum rhodiola*. Summer.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
Glen Callater, July 1844. Gardiner. Aberdour. Rev. J. Fergusson.

1263. P. epilobii D. C. *C. Hbk. No.* 1508.
On leaves of *Epilobium*. Summer. 1500 ft.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1264. P. pulverulenta Grev. *C. Hbk. No.* 1509.
On leaves of *Epilobium hirsutum*. Autumn. 1200 ft.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——
England.

1265. P. circaeae Pers. *C. Hbk. No.* 1510.
On leaves of *Circæa*. Autumn.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1266. P. fabae* Link. *C. Hbk. No.* 1512.
On beans and *Orobus tuberosus*. Summer—Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.
Some doubt exists whether a true Puccinia is ever developed on bean. *Trichobasis fabæ*, hitherto regarded as the Uredo spores of *Puccinia fabæ*, is common. I therefore retain *Puccinia fabæ* provisionally.

1267. P. fallens Cooke. *Hbk. No.* 1513.
On *Anthyllis*.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Findhorn and Aviemore. Rev. J. Keith.
England. Europe.

1268. **P. buxi** D. C. *C. Hbk. No.* 1514.
On leaves of boxwood. Spring—Autumn.
East. —— Forth Tay —— —— ——
West —— —— —— ——
England. Europe.

CC. UROMYCES Lev.

1269. **U. alliorum** * D. C. *C. Hbk. No.* 1542.
On *Allium*. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Dun. J. S.
England. Europe.

1270. **U. appendiculata** * Lev. *C. Hbk. No.* 1543.
On *Leguminosæ*. Summer—Autumn.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1271. **U. apiculosa** * Lev. *C. Hbk. No.* 1544.
On *Oxyria*, dock, clover, &c. Summer—Autumn.
2200 ft.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1272. **U. ficariae** * Lev. *C. Hbk. No.* 1546.
On *Ranunculus ficaria*. Spring—Summer.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe.

1273. **U. geranii** Berk. *Trichobasis, C. Hbk. No.* 1589.
On leaves of *Geranium*. Autumn. 1200 ft.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1274. U. concomitans B. & Br. *No.* 1470. *C. Micro Fungi, p.* 213.

Sori crowded in a ring, irregular, plane; pseudo-spores obovate, even; pedicels attenuated downwards.

On *Scrophularia nodosa*, surrounding *Æcidium*. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Noran. Rev. M. L. Anderson. Dunkeld. Dr. B. White. Monikie. Rev. J. Fergusson.

1275. U. intrusa* Lev. *C. Hbk. No.* 1547.

On *Alchemilla*. Summer—Autumn. 1000 ft.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1276. U. concentrica Lev. *C. Hbk. No.* 1548.

On wild hyacinth and harebell. Summer.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1277. U. polygoni Fckl. *C. Hbk. No.* 1549.

On *Polygonum*. Autumn.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. Siberia.

CCI. GYMNOSPORANGIUM D. C.

1278. G. juniperi Link. *C. Hbk. No.* 1515.

On living bark of juniper. June.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sanquhar. Rev. J. Keith.
England. Europe. America.

CCII. PODISOMA Link.

1279. P. juniperi * Fr. *C. Hbk. No.* 1516.

On living bark of *Juniperus communis*. May—June.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

1280. P. sabinae Fr. *C. Hbk. No.* 1517.

On living branches of *Juniperus sabinæ*. Spring.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe.

Order XVI.—CAEOMACEI.

CCIII. CROMARTIUM Tul.

CIV. UREDO Lev.

1281. U. potentillarum D. C. *C. Hbk. No.* 1567.

On *Potentilla* and *Alchemilla*. Summer. 2200 ft.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. Himalayas.

1282. U. saxifragarum * D. C. *C. Hbk. No.* 1568.

On *Saxifraga granulata*, and *S. aizoides*. Summer. 2000 ft.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

1283. U. filicum Desm. *C. Hbk. No.* 1569.

On fern fronds. Summer. 2700 ft.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe.

1284. U. pustulata Pers. *C. Hbk. No.* 1570.

On *Epilobium.* Autumn. 1500 ft.

East. —— Forth Tay —— —— ——

West. —— —— ——

England. Europe.

1285. U. hypericorum* D. C. *C. Hbk. No.* 1571.

On *Hypericum.* Summer—Autumn.

East. —— —— Tay —— —— ——

West. —— —— Argyle ——

England. Europe. Himalayas.

1286. U. caryophyllacearum Johnst. *C. Hbk. No.* 1572.

On *Stellaria uliginosa*, and *Cerastium.* Spring—Autumn.

East. Tweed Forth Tay —— Moray ——

West. —— —— —— ——

Europe.

1287. U. porphyrogenita Kze. *U. padi, C. Hbk. No.* 1574.

On *Prunus padus.* Summer—Autumn. 1300 ft.

East. —— —— Tay Dee Moray ——

West. —— —— —— ——

Europe.

1288. U. vacciniorum* Pers. *C. Hbk. No.* 1575.

On *Vaccinium uliginosum.* Summer. 2400 ft.

East. Tweed —— Tay —— Moray ——

West. —— Clyde Argyle ——

England. Europe. America.

1289. U. confluens* D. C. *C. Hbk. No.* 1576.

On *Mercurialis perennis.* Spring—Summer.

East. Tweed Forth Tay Dee Moray ——

West. —— —— —— ——

England. Europe.

1290. U. orchidis Mart. *C. Hbk. No.* 1576. *Micro. Fungi, p.* 216.

On *Habenaria.*

East. —— —— Tay —— —— ——

West. —— —— —— ——

Fern. Monikie. Rev. J. Fergusson.

England. Europe.

1291. U. empetri D. C. *C. Hbk. No.* 1577.
On *Empetrum nigrum.* Summer. 2500 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1292. U. alliorum D. C. *C. Hbk. No.* 1579.
On *Allium.*
Scotland. Dr. M. C. Cooke.
England. Europe.

1293. U. bifrons* Grev. *C. Hbk. No.* 1581.
On *Rumex acetosa.* Spring—Autumn. 1000 ft
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe.

CCV. COLEOSPORIUM Lev.

1294. C. tussilaginis* Lev. *C. Hbk. No.* 1552.
On leaves of *Tussilago farfara.* Summer. 2000 ft.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1295. C. petasitis Lev. *C. Hbk. No.* 1554.
On *Tussilago petasites.* Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1296. C. pingue* Lev. *C. Hbk. No.* 1553.
On leaves of roses. Summer.
East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. Himalayas.

Var. **alchemillae** B. & Br. *No.* 1468.
The sori are crowded, and radiate from the base of the leaf.
Glamis. J. S.
England. Wales.

1297. C. campanulae* Lev. *C. Hbk. No.* 1555.

On *Campanulæ.* Summer—Autumn. 1500 ft.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. Siberia.

1298. C. sonchi-arvensis* Lev. *C. Hbk. No.* 1556.

On leaves of *Sonchus.* Summer—Autumn.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1299. C. rhinanthacearum* Lev. *C. Hbk. No.* 1557.

On *Euphrasia, Melampyrum,* &c. Summer—Autumn. 2000 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe.

CCVI. MELAMPSORA Cast.

1300. M. euphorbiae* Cast. *C. Hbk. No.* 1562.

On leaves of *Euphorbia.* Autumn—Winter.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. Siberia.

1301. M. populina* Lev. *C. Hbk. No.* 1561.

On leaves of *Populus nigra.* Autumn—Winter.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America.

1302. M. tremulae* Tul. *C. Hbk. No.* 1560.

On leaves of *Populus tremula.* Autumn. 1200 ft.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

1303. M. betulina * Desm. *C. Hbk. No.* 1559.
On leaves of birch. Summer—Spring. 2000 ft.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. Siberia.

1304. M. salicina * Lev. *C. Hbk. No.* 1558.
On leaves of *Salices*. Summer—Winter. 2400 ft.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. Siberia.

CCVII. CYSTOPUS De Bary.

1305. C. candidus * Lev. *C. Hbk. No.* 1564.
On *Cruciferæ*, Shepherd's purse, &c. Spring—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. Egypt. America. Australia. Siberia.

1306. C. cubicus Str. *C. Hbk. No.* 1563.
On *Tragopogon*. Summer—Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America. Siberia.

1307. C. spinulosus De Bary. *C. Hbk. No.* 1566.
On *Cnicus lanceolatus*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Den of Vane. Rev. M. L. Anderson.
England. Europe.

CCVIII. LECYTHEA Lev.

1308. L. mixta * Lev. *C. Hbk. No.* 1592.
On willows. Summer—Autumn.
East. —— Forth Tay —— —— ——
West. —— —— —— Ross
England. Europe.

1309. L. saliceti * Lev. *C. Hbk. No.* 1593.
On willows. Summer—Autumn.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	Clyde	——	Ross		

England. Europe.

1310. L. valerianae Berk. *C. Hbk. No.* 1595.
On *Valeriana officinalis.* Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

1311. L. lini Berk. *C. Hbk. No.* 1596.
On *Linum catharticum.* Summer. 2400 ft.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe. Australia.

CCIX. TRICHOBASIS Lev.

1312. T. rubigo-vera * Lev. *C. Micro. Fungi, p.* 222.
Spots yellow, heaps oval, scattered, generally on the upper surface; epidermis at length bursting longitudinally; spores subglobose, reddish-brown, easily dispersed.
Uredo spores of *Puccinia straminis.* De Bary.
On grasses and corn. Summer.

East.	Tweed	Forth	Tay	Dee	——	——
West.	——	Clyde	——	Ross		

England. Europe.

1313. T. linearis * Lev. *C. Micro. Fungi, p.* 223.
Spots yellow-brown; sori elliptic, then elongated and linear; epidermis bursting; spores oblong or globose, yellow.
Uredo spores of *Puccinia graminis.*
On grasses and corn. Summer.

East.	Tweed	Forth	Tay	Dee	——	——
West.	——	Clyde	——	Ross		

England. Europe. America. Ceylon.

1314. T. glumarum Lev. *C. Hbk. No.* 1582.
On glumes of corn. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Perth. Dr. B. White.
England. Europe.

1315. T. pyrolae Berk. *C. Hbk. No.* 1584.
On *Pyrola*. Autumn. 2300 ft.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. Arctic.

1316. T. petroselini Berk. *C. Hbk. No.* 1585.
On parsley, *Heracleum*, &c. Summer.

East.	——	Forth	——	——	Moray	——
West.	——	——	——	——		

England. Europe.

1317. T. oblongata* Berk. *C. Hbk. No.* 1586.
On *Luzulæ*. Spring—Summer. 2400 ft.

East.	Tweed	Forth	Tay	Dee	——	——
West.	——	Clyde	——	Ross		

England.

1318. T. cirsii Lasch. *B. & Br. No.* 1608. *C. Micro. Fungi, p.* 225.
Sori small, scattered, flattened; spores globose, cinnamon, or brownish, smooth.
Condition of *Puccinia Cirsii*.
On thistles. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Dupplin Castle. Dr. M. C. Cooke.
Europe.

1319. T. betae* Lev. *C. Hbk. No.* 1587.
On *Rumex*. Summer—Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis Den. J. S.
England. Europe.

1320. T. fabae* Lev. *Uredo spores, C. Hbk. No.* 1512.
On beans. Autumn.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

1321. T. suaveolens* Lev. *C. Hbk. No.* 1588.
On leaves of thistles. Summer.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

CCX. PROTOMYCES Ung.

Entophytal; spores simple, aggregated, always immersed; epispore firm, diaphanous; endochrome granular, coloured, immersed in the matrix.

1322. P. macrosporus* Ung. *B. & Br. No.* 1474. *C. Micro. Fungi, p.* 227.

Forming confluent bullate patches consisting of the subglobose spores, with a thick epispore, yellowish brown.

On stalks of *Aegopodium podagraria.* Summer—Autumn.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson. Glamis, &c. J. S. Europe.

1323. P. chrysosplenii B. & Br. *No.* 1472. *C. Micro. Fungi, p.* 227.

Spots white, rather thick; spores globose, hyaline, pedicellate.

On leaves of *Chrysosplenium oppositifolium.*

East. —— —— —— Dee Moray ——
West. —— —— —— ——

New Pitsligo. Rev. J. Fergusson. Findhorn. Rev. J. Keith.

1324. P. Fergussoni. *B. & Br. No.* 1473. *C. Micro. Fungi, p.* 227.

Spots or points brown, irregular; spores obovate, at first hyaline, very shortly pedicellate, even, then fuscous.

On leaves of *Myosotis.*

East. —— —— Tay Dee —— ——
West. —— —— —— ——

New Pitsligo. Fern. Rev. J. Fergusson.

1325. P. menyanthis* De Bary. *B. & Br. No.* 1474. *C. Micro. Fungi, p.* 228.

Spores aggregated in roundish or confluent patches, immersed in the substance of the leaves, purplish on the surface; spores subglobose, brownish.

On *Comarum palustre.* Summer. 1250 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Loch of Balgavies, 1874. J. S. Loch Rannoch. Dr. B. White.
England. Europe.

1326. P. comari B. & Br. *No.* 1708.

Pustules fuscous; spores in swollen cells of the matrix, ternate or solitary, ·001–·0012 inch long, broadly obovate.
Pustules more prominent than in *P. menyanthis.*

On *Comarum palustre.* Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Loch of Kinnordy. Rev. M. L. Anderson.

CCXI. SYNCHYTRIUM De Bary.

CCXII. USTILAGO Link.

1327. U. grammica* B. & Br. *C. Hbk. No.* 1529.

On grasses. Summer—Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England.

1328. U. longissima* Tul. *C. Hbk. No.* 1522.

On leaves of grass. Spring—Autumn.

East. —— —— Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe.

1329. U. hypodytes Fr. *C. Hbk. No.* 1524.

On culms of grass. Summer.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.
England. Europe. America.

1330. U. segetum* Ditm. *U. carbo, C. Hbk. No.* 1520.

On grass and corn. Summer—Autumn.

East. Tweed Forth Tay Dee Moray Sutherland.
West. Solway Clyde Argyle Ross

England. Europe. Egypt. America. Siberia. Australia. Japan.

1331. U. urceolorum Tul. *C. Hbk. No.* 1521.
On *Carices.* Autumn. 2300 ft.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. America. Australia.

1332. U. vinosa Tul. *C. Hbk. No.* 1530.
On receptacles of *Oxyria reniformis.* 2200 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1333. U. antherarum Fr. *C. Hbk. No.* 1534.
On anthers of *Lychnis*, &c. Summer. 1200 ft.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1334. U. intermedia Schröt. *C. Micro. Fungi, p.* 230.
Produced on the florets; mass of spores violet; spores globose or elliptic (·011–·0137 mm.); epispore clear, violet, with narrow areolæ.
On florets of *Scabiosa.* Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Findhaven. Warburton. Rev. J. Fergusson.
Europe.

1335. U. utriculosa Tul. *C. Hbk. No.* 1531.
On leaves and stems of *Polygonum.* Autumn.
East. —— —— Tay —— —— ——
West. —— —— Argyle ——
England. Europe. America. Australia.

1336. U. receptaculorum Fr. *C. Hbk. No.* 1533.
On *Tragopogon* and *Carduus heterophyllus.* Autumn. 1200 ft.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe.

1337. U. flosculorum Fr. *C. Hbk. No.* 1532.
On *Scabiosa arvensis.*
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe.

CCXIII. SOROSPORIUM Rud.

1338. S. trientalis* Woron. *Tubercinia* B. & Br. *C. Hbk. No.* 1537.

On leaves of *Trientalis europœa*. Autumn.

East.	——	——	Tay	Dee	——	——
West.	——	——	——	——		

England. Europe.

1339. S. scabies* Berk. *Tubercinia* Berk. *C. Hbk. No.* 1536.

On potatoes. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	Ross		

England.

CCXIV. THECAPHORA Fing.

CCXV. UROCYSTIS Rabh.

1340. U. pompholygodes Lev. *C. Hbk. No.* 1541.

On *Ranunculus* and *Anemone*. Summer.

East.	——	Forth	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe.

1341. U. parallela B. & Br. *U. occulta* Preuss. *C. Hbk. No.* 1540.

On leaves of *Carex*. Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Forfarshire. Gardiner.
England. Europe.

1342. U. violae B. & Br. *C. Hbk. No.* 1538.

On violet. Summer—Autumn.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Fern. Rev. J. Fergusson.
England.

CCXVI. ENTYLOMA De Bary.

Mycelium of very thin branched filaments, the ends of which are transformed into spore-bearers. For the formation of the spores these parts are swollen and divided by transverse partitions; spores rounded polyhedric, of a clear yellowish-brown, usually with a thick membrane composed of two distinct layers.

1343. **E. Ungeriarum** De Bary. *Protomyces microsporus* Unger. *B. & Br. No.* 1471. *C. Micro. Fungi, p.* 233.

At first in the form of rounded patches, later as brownish-yellow swellings; spores variable in form, polyhedric, with a thick double membrane more or less verrucose.

On *Ranunculus ficaria.* Summer—Autumn.

East. —— —— —— Dee Moray ——
West. —— —— —— ——

New Pitsligo. Rev. J. Fergusson. Sanquhar. Rev. J. Keith.
Europe.

CCXVII. TILLETIA Tul.

1344. **T. caries** * Tul. *C. Hbk. No.* 1519.

On cereals. Autumn.

East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

Order XVII.—AECIDIACEI.

CCXVIII. ROESTELIA Reb.

1345. **R. cornuta** * Tul. *C. Hbk. No.* 1598.

On leaves of mountain ash. Autumn. 1400 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross

England. Europe.

1346. R. lacerata * Tul. *C. Hbk. No.* 1599.
On leaves of hawthorn. Summer. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

CCXIX. PERIDERMIUM Chev.

1347. P. pini* Chev. *C. Hbk. No.* 1600.
On branches of Scotch fir. Spring—Summer.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. India.

1348. P. acicolum* Lk. *C. Micro. Fungi, p.* 194.
Peridia elongated, scattered, flattened laterally; spores oblong or elliptic, large, orange.
On leaves of Scotch fir. Spring.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

CCXX. AECIDIUM Pers.

1349. Æ. leucospermum * D. C. *C. Hbk. No.* 1603.
On *Anemone nemorosa.* Summer. 1500 ft.
East. —— —— Tay —— —— ——
West. Solway —— Argyle ——
England. Europe. America.

1350. Æ. albescens * Grev. *C. Hbk. No.* 1605.
On *Adoxa moschatellina.* Spring.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1351. Æ. epilobii * D. C. *C. Hbk. No.* 1606.
On *Epilobium.* Summer—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1352. Æ. soldanellae Hornsh. *C. Hbk. No.* 1608.
On leaves of *Soldanella alpina.*

East.	——	——	——	——	——	——
West.	——	Clyde	——	——		

Glasgow Botanic Garden. Hook. Herb.
Europe.

1353. Æ. tragopogonis Pers. *C. Hbk. No.* 1609.
On *Tragopogon.* Summer.

East.	Tweed	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

1354. Æ. berberidis * Pers. *C. Hbk. No.* 1612.
On *Berberis.* Summer—Autumn.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe. America. India.

1355. Æ. thalictri Grev. *C. Hbk. No.* 1615.
On *Thalictrum Alpinum.* 3000 ft.

East.	——	Forth	Tay	Dee	——	——
West.	——	——	——	——		

1356. Æ. crassum * Pers. Var. **periclymeni** D. C. *C. Hbk. No.* 1613.
On honeysuckle. Summer.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	Argyle	——		

England. Europe. America.

1357. Æ. calthae Grev. *C. Hbk. No.* 1614.
On *Caltha palustris.* Spring.

East.	——	Forth	Tay	Dee	——	——
West.	——	——	——	——		

England.

1358. Æ. ranunculacearum * D. C. *C. Hbk. No.* 1615.
On leaves of *Ranunculaceæ.* Spring—Summer.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	Solway	Clyde	——	——		

England. Europe. America. Australia.

1359. Æ. galii * Pers. *C. Hbk. No.* 1616.
On *Galium.* Summer—Autumn. 1000 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1360. Æ. bunii D. C. *C. Hbk. No.* 1617.
On *Bunium bulbocastanum.* Spring—Summer.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1361. Æ. valerianacearum Duby. *C. Hbk. No.* 1618.
On *Valeriana.* Autumn.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
Europe.

1362. Æ. asperifolii Pers. *C. Hbk. No.* 1619.
On *Lycopsis arvensis.* Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
St. Andrews. Rev. M. L. Anderson.
England. Europe.

1363. Æ. grossulariae * D. C. *C. Hbk. No.* 1620.
On leaves and fruit of gooseberry. Summer.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

1364. Æ. urticae * D. C. *C. Hbk. No.* 1621.
On leaves and stems of nettle. Summer—Autumn.
1200 ft.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America.

1365. Æ. orobi D. C. *C. Hbk. No.* 1623.
On *Orobus tuberosus.* Summer. 2000 ft.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Siberia.

1366. **Æ. compositarum** Mart. *C. Hbk. No.* 1624.
Var. *a.* **taraxaci** * Grev.
On dandelion. Summer. 1600 ft.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America. Australia.

Var. *b.* **prenanthis** Pers.
On *Hieracium.* Summer. 2500 ft.

East.	Tweed	Forth	Tay	Dee	——	——
West.	——	——	——	——		

England. Europe.

Var. *c.* **tussilaginis** * Pers.
On *Tussilago.* Spring—Autumn.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe.

Var. *d.* **Jacobaeae** * Grev.
On *Senecio Jacobæa.* Summer—Autumn.

East.	——	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

Var. *e.* **lapsani** Purt.
On *Lapsana.* Spring.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Fern, Brechin, &c. Rev. J. Fergusson.
England. Europe.

Var. *f.* **bellidis** D. C.
On daisy. Summer.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Fern. Rev. J. Fergusson.
England.

1367. **Æ. saniculae** Carm. *C. Hbk. No.* 1625.
On *Sanicula Europæa.* Autumn.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Grantown. Rev. J. Keith.
England.

1368. Æ. violae * Schum. *C. Hbk. No.* 1626.

On violets. Spring—Summer. 1600 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia. Himalayas.

1369. Æ. parnassiae Grev. *C. Micro. Fungi, p.* 198.

Hypophyllous; spots pallid, peridia in subrotund patches, irregularly disposed, tawny-yellow, between urceolate and concave; the margin thick and nearly entire; spores pallid. *Duby. Bot. Gall.* ii. p. 904.

On leaves of *Parnassia palustris.* 1500 ft.

East. —— Forth Tay Dee —— ——
West. —— Clyde —— ——

1370. Æ. geranii D. C. *C. Hbk. No.* 1627.

On *Geranium sylvaticum.* Summer. 1200 ft.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1371. Æ. menthae * D. C. *C. Hbk. No.* 1628.

On various mints. Summer.

East. —— —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

1372. Æ. scrophulariae D. C. *C. Hbk. No.* 1629.

On *Scrophularia.* Summer.

East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1373. Æ. pedicularis * Lobosch. *C. Hbk. No.* 1630.

On *Pedicularis palustris.* Summer—Autumn. 1400 ft.

East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe.

1374. Æ. primulae * D. C. *C. Hbk. No.* 1631.

On leaves of *Primulæ.* Summer.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——
England. Europe.

1375. Æ. rubellum Pers. *C. Hbk. No.* 1632.
On dock, &c. Summer.

East.	——	Forth	Tay	Dee	——	——
West.	——	——	——	——		

England. Europe. America. Himalayas.

1376. Æ. allii Grev. *C. Hbk. No.* 1634.
On *Allium ursinum*. Summer.

East.	Tweed	Forth	——	——	——	——
West.	——	——	——	——		

Edinburgh. Greville. Jedburgh. A. Jerdon.
England.

1377. Æ. orchidearum Fiedl. *C. Hbk. No.* 1635.
On *Orchis*. Summer.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Burghill. Monikie. Rev. J. Fergusson.
England. Europe.

1378. Æ. trifoliorum * Cast. *Cal. Pl. Mars. p.* 215.
Spots none; peridia numerous, minute, on the under surface of the leaves, and the petioles; yellow, spores darker, subspherical, somewhat angular.
On clover. Summer—Autumn. 1000 ft.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Menmuir, June 1875. Rev. M. L. Anderson. Clova, Glen Doll. J. S.
Europe.

CCXXI. ENDOPHYLLUM Lev.

CCXXII. MILESIA B. White.

Peridium minute, reticulated, immersed on the substance of the matrix, into which the base sends root-like fibres; spores distinctly spiny, ejected copiously from a minute ostiolum at the summit of the peridium. Allied to *Endophyllum* Lev.

1379. M. polypodii Berk. & White. *Scot. Nat.* iv. *p.* 163.. *Pl.* ii. *f.* 5. *B. & Br. No.* 1709.

Peridia minute, spherical, scattered irregularly on the under side of the frond, appearing under a lens-like little pallid mammæform

projections, very slightly elevated ; spores whitish, obovate, echinulate, ejected copiously from the ostiolum, appearing to be filled with a granular matter, ·0012–·0017 inch long.

On fading leaves of *Polypodium vulgare.* June—July.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Den of Reichip, 1877, &c. Dr. B. White.

CCXXIII. GRAPHIOLA Poit.

FAMILY IV.—HYPHOMYCETES.

Order XVIII.—ISARIACEI.

CCXXIV. ISARIA Fr.

1380. **I. arachnophila** Fr. *C. Hbk. No.* 1639.
On dead spider.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1381. **I. citrina** Pers. *C. Hbk. No.* 1641.
On decaying fungi. Autumn.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe. America.

1382. **I. intricata** * Fr. *C. Hbk. No.* 1642.
On dead *Stereum hirsutum*. Autumn—Winter.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

1383. **I. sphingum** Schw. *Fr. Sys. Myc.* iii. *p.* 275. *B. & Br. No.* 1710.
Gregarious on a silky mycelium, simple, very long, setaceous, compressed, somewhat pulverulent, whitish.
Mycelium much branched.
On pupæ of *Diptera*.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Kincardineshire. J. Taylor.
Europe.

CCXXV. ANTHINA Fr.

1384. A. flammea* Fr. *C. Hbk. No.* 1645.
On dead beech leaf. Autumn.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

CCXXVI. CERATIUM A. & S.

1385. C. hydnoides* A. & S. *C. Hbk. No.* 1646.
On rotten wood. Summer—Autumn.

East.	——	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe. America. Ceylon.

CCXXVII. PACHNOCYBE Berk.

1386. P. subulata Berk. *C. Hbk. No.* 1647.
On dead fir cone. Autumn.

East.	Tweed	——	——	Dee	——	——
West.	——	——	——	——		

England. Europe. America.

1387. P. grisea Berk. *C. Hbk. No.* 1648.
On decaying cabbage stalks. Autumn.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Kinrara, &c. Rev. J. Keith.
England. Europe.

Order XIX.—STILBACEI.

CCXXVIII. STILBUM Tode.

1388. S. tomentosum Schrad. *C. Hbk. No.* 1651.
On *Trichiæ*, &c.

East.	Tweed	——	——	——	——	——
West.	——	——	Argyle	——		

England. Europe. America.

1389. S. rigidum * Pers. *C. Hbk. No.* 1657.
On rotten wood. Spring.

East.	——	——	Tay	——	——	——
West.	——	——	——	——

Glamis. J. S.
England. Europe. America.

1390. S. bicolor Pers. *C. Hbk. No.* 1659.
On trunks of trees.

East.	——	——	——	——	——	——
West.	——	——	Argyle	——

Appin. Carmichael.
Europe.

1391. S. pellucidum Schrad. *C. Hbk. No.* 1662.
On wood and rotten fungi.

East.	——	——	——	——	——	——
West.	——	——	Argyle	——

Appin. Carmichael.
England. Europe.

1392. S. vulgare Tode. *C. Hbk. No.* 1664.
On dead wood. Spring.

East	——	Forth	Tay	——	——	——
West.	——	——	——	——

England. Europe. America.

1393. S. Stevensoni* B. & Br. *No.* 1713.
Scattered; stem very short, black; head snow-white, globose; spores very minute, globose.
Looks like a very minute *Didymium*.
On dead wood. Nov.

East.	——	——	Tay	——	——	——
West.	——	——	——	——

Glamis, Hunter's Hill, 1875. J. S.

1394. S. orbiculare B. & Br. *No.* 1714. *Pl.* iii. *f.* 4.
White; forming patches an inch or more in diameter, springing from a white, thin, pulverulent stratum; stem cylindrical, tomentose, the apex sometimes clad with the torn covering; head globose; spores oblong, minute, ·0002 inch long.
At first sight it looks like a parasitic *Hydnum*.
On *Lindbladia effusa*. Sept.

East.	——	——	——	——	Moray	——
West.	——	——	——	——

Rothiemurchus. Rev. J. Keith.

CCXXIX. ATRACTIUM Fr.

CCXXX. MICROCERA Desm.

CCXXXI. VOLUTELLA Fr.

1395. V. ciliata Fr. *C. Hbk. No.* 1667.
On potatoes. April.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe. America.

1396. V. setosa Berk. *C. Hbk. No.* 1668.
On wood, herbaceous stems, &c. Autumn.
East. —— Forth Tay —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

CCXXXII. TUBERCULARIA Tode.

1397. T. granulata Pers. *C. Hbk. No.* 1671.
On dead wood.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1398. T. nigricans Link. *C. Hbk. No.* 1672.
On dead branches.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe. America.

CCXXXIII. FUSARIUM Link.

1399. F. lateritium* Nees. *C. Hbk. No.* 1674.
On dead wood. Summer.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1400. F. translucens* B. & Br. *No.* 1610.

Pellucid, substipitate; margin under a lens delicately ciliate, becoming yellowish-white, umbilicate above; spores slender, cylindrical. Forming little transparent specks about $\frac{1}{6}$ of a line in diameter. Spores ·0003 inch long.

Differs from *F. minutulum* Cd. in the form of the spores.

On deal.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1875. J. S.

1401. F. rhabdophorum B. & Br. *No.* 1612.

Erumpent, somewhat tawny, elevated from a white orbiculate base; spores straight, rod-shaped, ·0006 inch long.

On *Valsæ* on dead sticks.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.

CCXXXIV. MYROTHECIUM Tode.

1402. M. roridum Tode. *C. Hbk. No.* 1677.

On rotting plants, dried agarics, &c.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.
England. Europe. America.

CCXXXV. EPICOCCUM Link.

1403. E. neglectum Desm. *C. Hbk. No.* 1678.

On peeled oak, dead potato stems, &c. Winter.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

CCXXXVI. ILLOSPORIUM Mont.

1404. I. roseum Fr. *C. Hbk. No.* 1680.

On lichens. Sept.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1405. I. carneum Fr. *C. Hbk. No.* 1681.
On *Peltidea canina*. Spring.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Moncreiffe. Dr. B. White.
England. Europe.

CCXXXVII. AEGERITA Pers.

1406. Æ. candida* Pers. *C. Hbk. No.* 1684.
On dead wood. Spring—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe. America. Ceylon.

Order XX.—DEMATIEI.

CCXXXVIII. ARTHROBOTRYUM Cesati.

CCXXXIX. DENDRYPHIUM Corda.

1407. D. curtum B. & Br. *C. Hbk. No.* 1688.
On dead stems of nettle. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Dundee. W. M. Ogilvie. Dupplin. M. C. Cooke.

1408. D. laxum B. & Br. *C. Hbk. No.* 1689.
On dead potato stems.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England.

CCXL. PERICONIA Corda.

1409. P. calicioides* Berk. *C. Hbk. No.* 1694.
On oak, and dead herbaceous stems. Spring.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

CCXLI. OEDOCEPHALUM Preuss.

CCXLII. SPOROCYBE Fr.

1410. S. byssoides Fr. *C. Hbk. No.* 1696.
On dead stems of nettle.

East.	Tweed	——	——	——	——	——
West.	——	——	——	——		

Jedburgh. A. Jerdon.
England. Europe. America.

1411. S. nigrella * Berk. *C. Hbk. No.* 1697.
On dead grass. Summer—Autumn.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England.

CCXLIII. STACHYBOTRYS Corda.

CCXLIV. HAPLOGRAPHIUM B. & Br.

CCXLV. MONOTOSPORA Corda.

1412. M. megalospora B. & Br. *C. Hbk. No.* 1702.
On old stumps.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Greeshop. Rev. J. Keith.
England.

CCXLVI. CEPHALOTRICHUM Link.

CCXLVII. OEDEMIUM Fr.

CCXLVIII. HELMINTHOSPORIUM Link.

1413. A. Smithii B. & Br. *C. Hbk. No.* 1706.
On dead holly.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.
England.

1414. H. folliculatum Corda. *C. Hbk. No.* 1707.
On cabbage stalks. April.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England. Europe.

1415. H. macrocarpum Grev. *C. Hbk. No.* 1708.
On broom-sticks, &c.
East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1416. H. subulatum Nees. *C. Hbk. No.* 1709.
On oak branches.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe. America.

1417. H. velutinum Link. *C. Hbk. No.* 1710.
On rotten wood.
East. —— Forth —— —— Moray ——
West. —— —— Argyle ——
England. Europe.

1418. H. tiliae Fr. *C. Hbk. No.* 1714.
On lime branches.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1419. H. Rousselianum Mont. *C. Hbk. No.* 1715.
On dead wood with *Sporochisma mirabile.* Autumn.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh Botanic Garden. Dr. M. C. Cooke.
England. Europe.

1420. H. delicatulum Berk. *C. Hbk. No.* 1718.
On stems of *Umbelliferæ.*
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England.

1421. H. apiculatum Corda. *C. Hbk. No.* 1722.

On ivy stick.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1422. H. apicale * B. & Br. *C. Hbk. No.* 1723.

On rotten wood. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England.

1423. H. fusiforme Corda. *Icon.* i. *p.* 13. *tab.* 3. *fig.* 194.

Effused, very thin, scarcely conspicuous, brownish; flocci almost solitary, thin, simple, brown, pellucid; spores fusiform, multiseptate, yellowish, pellucid, obtuse at the ends and hyaline.

On beech. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Moncreiffe. Dr. B. White.
Europe.

1424. H. stemphylioides Corda. *Practfl. tab.* iv. *C. Jour. Quek. Micro. Club,* 1877. *Pl.* xxiv. *fig.* 2.

Tufts collected in broad, indeterminate, strigose, black patches; flocci short, crowded, simple, pallid, bearing a solitary spore at the apex; spores obovate, with brown and yellow zones, 3–5, or 7-septate, ultimate cells uncoloured.

On herbaceous stems.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh Botanic Garden. Dr. M. C. Cooke.
England. Europe.

CCXLIX. MACROSPORIUM Fr.

1425. M. cheiranthi Fr. *C. Hbk. No.* 1730.

On wallflower, sweet-william, and stock. Winter.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America

1426. M. concinnum * Berk. *C. Hbk. No.* 1732.
On dead bark. Aug.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

CCL. MYSTROSPORIUM Corda.

CCLI. ACROTHECIUM Corda.

CCLII. SEPTOSPORIUM Corda.

CCLIII. TRIPOSPORIUM Corda.

1427. T. elegans Corda. *C. Hbk. No.* 1739.
On sticks.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England. Europe. America.

CCLIV. HELICOMA Corda.

1428. H. Mulleri Corda. *C. Hbk. No.* 1740.
On *Prunus padus* stick. Dec.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Dunphail. Rev. J. Keith.
England. Europe. America.

CCLV. HELICOCORYNE Corda.

CCLVI. CLADOTRICHUM Corda.

CCLVII. POLYTHRINCIUM Kunze.

1429. P. trifolii Kunze. *C. Hbk. No.* 1743.
On clover leaves. Aug. 1600 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

CCLVIII. CLADOSPORIUM Link.

1430. C. herbarum* Link. *C. Hbk. No.* 1744.

On decaying stems, leaves, &c. Jan.—Dec. 3000 ft.

East. Tweed Forth Tay Dee —— ——
West. —— Clyde —— Ross

England. Europe. America. Siberia. Australia.

Var. **fasciculare*** Corda. Jedburgh. A. Jerdon. Loch of Rescobie. J. S.

1431. C. epiphyllum Nees. *C. Hbk. No.* 1745.

On dead alder leaves. Autumn.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1432. C. dendriticum Wallr. *C. Hbk. No.* 1747.

On pear leaves and blossoms.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
England. Europe.

1433. C. depressum B. & Br. *C. Hbk. No.* 1749.

On leaves of *Angelica.*

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England.

CCLIX. ARTHRINIUM Kunze.

CCLX. GONATOSPORIUM Corda.

1434. G. puccinioides Corda. *C. Hbk. No.* 1754.

On *Carices.* Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
England. Europe.

CCLXI. CAMPTOUM Link.

1435. C. curvatum Link. *C. Hbk. No.* 1755.
On dead leaves of *Carex paludosa*.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe.

CCLXII. SPORODUM Corda.

1436. S. conopleoides Corda. *C. Hbk. No.* 1756.
On dead grasses.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England. Europe.

Order XXI.—MUCEDINES.

CCLXIII. ASPERGILLUS Mich.

1437. A. glaucus* Link. *C. Hbk. No.* 1757.
On cheese, &c. Jan.—Dec.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America.

1438. A. candidus* Link. *C. Hbk. No.* 1759.
On decaying substances. Nov.
East. Tweed —— Tay —— —— ——
West. —— —— —— Ross
England. Europe.

1439. A. virens* Link. *C. Hbk. No.* 1762.
On decaying agarics. June—Dec.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

CCLXIV. NEMATOGONUM Desm.

1440. N. aureum* Berk. *C. Hbk. No.* 1764.
On dead wood. April—Dec.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den. J. S.
England.

CCLXV. RHINOTRICHUM Corda.

1441. R. repens* Preuss. *C. Hbk. No.* 1768.
On rotten wood. May.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

CCLXVI. BOTRYTIS Mich.

1442. B. terrestris Pers. *C. Hbk. No.* 1773.
On rotten sticks.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh. Greville. Sc. Crypt. Fl.
England. Europe.

CCLXVII. PERONOSPORA De Bary.

1443. P. infestans* Mont. *C. Hbk. No.* 1774.
On potato leaves and stems. Autumn.
East. Tweed Forth Tay Dee Moray Sutherland
West. Solway Clyde Argyle Ross
England. Europe. America.

1444. P. nivea * Ung. *C. Hbk. No.* 1775.
On *Angelica*. June.

East.	Tweed	——	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe.

1445. P. gangliformis * Berk. *C. Hbk. No.* 1777.
On *Sonchus arvensis*.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

1446. P. parasitica * Pers. *C. Hbk. No.* 1778.
On turnip, cabbage, &c. Autumn.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe. America.

1447. P. viciae * Berk. *C. Hbk. No.* 1779.
On leaves of pea. Summer.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

1448. P. arenariae Berk. *C. Hbk. No.* 1780.
On *Honckenya*, and *Arenaria trinervis*.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

1449. P. effusa * Grev. *C. Hbk. No.* 1781.
On spinach. Autumn.

East.	Tweed	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

1450. P. urticae * Casp. *C. Hbk. No.* 1782.
On leaves of nettle.

East.	——	——	Tay	Dee	——	——
West.	——	——	——	——		

England. Europe.

1451. P. trifoliorum * De Bary. *C. Hbk. No.* 1783.

On *Lotus corniculatus.* Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

1452. P. ficariae * Tul. *C. Micro. Fungi, p.* 235.

Fertile threads 5-6 times dichotomous, ultimate and penultimate ramuli arcuate and deflexed, ultimate subulate; conidia broadly ellipsoid, obtuse; epispore pale violet-tinted; oospores having the epispore of a pallid yellowish-brown.

On *Ranunculus ficaria*, and *R. repens.* April—Nov.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dupplin. Dr. M. C. Cooke. Glamis. J. S.
England. Europe.

1453. P. grisea * Ung. *C. Hbk. No.* 1784.

On *Veronica.* Autumn. 2500 ft.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe.

1454. P. calotheca * De Bary. *C. Micro. Fungi, p.* 236.

Flocci slender, 7-9 times dichotomous; primary branches oblique, erect, the rest patent, squarrose, slender; ultimate ramuli short, straight or curved; acrospores elliptical; oospores globose; epispore bay-brown, minutely reticulated.

On *Asperula odorata.* May.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Ewnie Den, 1877. J. S.
England. Europe. Siberia.

1455. P. sordida * Berk. *C. Hbk. No.* 1789.

On leaves of *Scrophularia.* Autumn.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England.

1456. P. candida * Fckl. *C. Hbk. No.* 1786.

On leaves of *Primulæ*. Summer—Autumn. 1500 ft.

East. —— Forth Tay Dee Moray ——
West. —— —— —— Ross

England. Europe.

1457. P. obliqua * Cooke. *C. Hbk. No.* 1791.

On *Rumex*. Spring.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe.

1458. P. interstitialis * B. & Br. *No.* 1455.

Spots hypophyllous, yellow, confined to the interstices of the veins, or very rarely extending slightly beyond them; flocci very short, flexuous; acrospores terminal, ovate, often seated obliquely, ·0006–·0007 inch long.

On leaves of *Primula vulgaris*. Summer.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, 1875. J. S. Menmuir. Rev. M. L. Anderson.

1459. P. rufibasis * B. & Br. *No.* 1456.

Spots epiphyllous, shining, tawny; pallid on the under surface; flocci linear; acrospores obovate or elongated, variable, obliquely attached, very shortly pedicellate.

The spots on the upper surface of the leaves are very conspicuous. Spores very variable in length.

On leaves of *Myrica gale*. Summer—Autumn.

East. —— —— Tay —— —— ——
West. —— Clyde —— Ross

Rescobie, 1875. Loch Maree. J. S. Rannoch. Tighnabruaich. Dr. B. White.

CCLXVIII. ACROSPEIRA B. & Br.

CCLXIX. VERTICILLIUM Link.

CCLXX. HAPLARIA Link.

1460. H. grisea Link. *C. Hbk. No.* 1797.

On *Sparganium*. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Fern. Rev. J. Fergusson.

England. Europe.

CCLXXI. POLYACTIS Link.

1461. P. vulgaris * Link. *C. Hbk. No.* 1798.
On decaying fig, &c. Autumn.
East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

1462. P. cana * Berk. *C. Hbk. No.* 1799.
On rotting leaves. Autumn.
East. —— —— Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

1463. P. cinerea * Berk. *C. Hbk. No.* 1801.
On herbaceous stems from *Sclerotium durum.* April.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1464. P. fascicularis Corda. *C. Hbk. No.* 1802.
On decaying leaves.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe. America.

CCLXXII. PENICILLIUM Link.

1465. P. crustaceum * Fr. *C. Hbk. No.* 1803.
On decaying vegetable substances.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1466. P. sparsum Grev. *C. Hbk. No.* 1804.
On decaying fruit, &c.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England.

1467. P. candidum Link. Var. **coremium.** *C. Hbk. No.* 1806.
On decaying substances.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1468. P. megalosporum B. & Br. *No.* 1457.
Snow-white, short; flocci fasciculate; spores globose or elongated, even, ·0005–·001 inch in diameter, or equally variable when oblong.
In an old chicken-coop.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Menmuir. Rev. M. L. Anderson.

CCLXXIII. OIDIUM Link.

1469. O. aureum Link. *C. Hbk. No.* 1810.
On rotten wood. Spring.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
England. Europe. America.

1470. O. fulvum Link. *C. Hbk. No.* 1811.
On rotten birch. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
England. Europe.

1471. O. fructigenum Schrad. *C. Hbk. No.* 1812.
On decaying fruit, agarics, &c.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England. Europe. America.

1472. O. fasciculatum * Berk. *C. Hbk. No.* 1813.
On rotting oranges.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1473. O. concentricum * B. & Br. *C. Hbk. No.* 1817.
On leaves of *Ranunculus ficaria*, &c. Spring—Summer.

East.	——	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

CCLXXIV. STYSANUS Link.

1474. S. stemonitis Corda. *C. Hbk. No.* 1818.
On decayed herbaceous plants. Spring—Summer.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Greeshop. Rev. J. Keith.
England. Europe.

1475. S. putredinis* Corda iii. *f.* 36.
Tufts effused, crowded, white, then farinose, and pale reddish; stem erect, slender, flexuous, tomentose or subpilose, white; capitulum large, obovate, snow-white, chains of spores at first few and distant, then crowded; spores oblong elliptic, ·00025–·00035 inch long. *B. & Br. No.* 1712, *Grevillea*, vi. *p.* 126.
On dead leaves. May.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Ewnie Den, 1877. J. S.
Europe.

CCLXXV. MONILIA Hill.

1476. M. fasciculata Corda. *C. Hbk. No.* 1819.
On dead grasses.

East.	——	Forth	——	——	——	——
West.	——	——	——	——		

Edinburgh. Greville. St. Crypt. Fl.

CCLXXVI. DACTYLIUM Nees.

1477. D. tenellum Fr. *C. Hbk. No.* 1822.
On moss. March.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Dundee, 1848. Gardiner.
Europe.

1478. D. macrosporum * Fr. *C. Hbk. No.* 1823.

On *Grandinia*, moss, &c. Autumn.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1479. D. dendroides Fr. *C. Hbk. No.* 1825.

On decayed fungi.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1480. D. roseum * Berk. *C. Hbk. No.* 1827.

On dead plants. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S. Dupplin. Dr. M. C. Cooke.
England. Europe. America.

1481. D. spirale Berk. & B. White. *B. & Br. No.* 1717, *Pl.* iv. *f.* 6. *Scot. Nat.* iv. *p.* 162, *Pl.* ii. *f.* 3.

White, springing from a scorched spot; flocci simple, spiral; spores large, uniseptate, constricted at the middle and very obtuse at both ends; flocci ·004 inch long; spores ·0009–·0012, half as much wide.

On living leaves of *Polygonum viviparum*. Aug. 1800 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glen Tilt, 1877. Dr. B. White.

1482. D. modestum Berk. & B. White. *B. & Br. No.* 1718, *Pl.* iv. *f.* 7. *Scot. Nat.* iv. *p.* 162, *Pl.* ii. *f.* 2.

White, springing from a scorched spot; flocci nearly straight or slightly flexuous; spores large, uniseptate, elongated, constricted in the middle. Flocci ·004 inch long; spores much narrower than in *D. spirale*.

On fading leaves of *Alchemilla alpina*. Aug. 1300 ft.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Glen Tilt, 1877. Loch Killein. Dr. B. White.

1483. D. cervinum * B. & Br. *No.* 1716.

Effused, pallid fawn-colour; flocci branched, articulate, spores obovate, uniseptate, apiculate downwards.

On *Cytisus laburnum.* Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Ballinluig, 1877. J. S.

CCLXXVII. CYLINDRIUM Bonorden.

CCLXXVIII. FUSIDIUM Link.

1484. F. griseum Link. *C. Hbk. No.* 1829.

On dead beech leaves. Autumn.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——

England. Europe. America.

1485. F. flavo-virens Fr. *C. Hbk. No.* 1830.

On dead oak leaves. Autumn.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——

England. Europe.

1486. F. album * Desm. *C. Hbk. No.* 1831.

On oak leaf in *Herbarium.*

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

CCLXXIX. SPOROTRICHUM Link.

1487. S. chlorinum Link. *C. Hbk. No.* 1832.

On dry leaves. Autumn.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——

Europe.

1488. S. aurantiacum Grev. *C. Hbk. No.* 1833.
On dung, old floor-cloth, &c.
East. —— Forth —— —— Moray ——
West. —— —— —— ——

1489. S. sulphureum Grev. *C. Hbk. No.* 1834.
In cellars, especially on corks.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1490. S. laxum Link. *C. Hbk. No.* 1835.
On cow-dung.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe.

1491. S. inosculans Berk. *C. Hbk. No.* 1836.
On *Thelephora.*
East. —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.

CCLXXX. ZYGODESMUS Corda.

1492. Z. fuscus Corda. *C. Hbk. No.* 1838.
On decaying bark.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

CCLXXXI. VIRGARIA Nees.

1493. V. nigra Fr. *C. Hbk. No.* 1839.
On dead wood.
East. —— Forth —— —— Moray ——
West. —— —— Argyle ——
England. Europe.

CCLXXXII. BOLACOTRICHA B. & Br.

CCLXXXIII. MYXOTRICHUM Kunze.

CCLXXXIV. GONYTRICHUM Nees.

CCLXXXV. MENISPORA Pers.

1494. M. lucida Corda. *C. Hdk. No.* 1845.

On sticks. March.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Waterford. Rev. J. Keith.
England. Europe.

1495. M. ciliata Corda. *C. Hdk. No.* 1846.

On decayed wood, broom, &c. Spring—Summer.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

CCLXXXVI. CHAETOPSIS Grev.

1496. C. Wauchii Grev. *C. Hdk. No.* 1847.

On decayed sticks.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——

Europe.

CCLXXXVII. ACREMONIUM Link.

1497. A. verticillatum Link. *C. Hdk. No.* 1848.

On dead wood. Spring.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

Europe.

1498. A. fuscum Schm. *C. Hbk. No.* 1850.
On dead wood. Autumn.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Braid Hermitage. Greville. Sc. Crypt. Fl.
Europe.

CCLXXXVIII. GONATOBOTRYS Corda.

CCLXXXIX. CLONOSTACHYS Corda.

CCXC. BOTRYOSPORIUM Corda.

1499. B. diffusum Corda. *C. Hbk. No.* 1854.
On dead herbaceous stems. Autumn.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

CCXCI. PAPULASPORA Preuss.

CCXCII. RHOPALOMYCES Corda.

Order XXII.—SEPEDONIEI.

CCXCIII. SEPEDONIUM Link.

1500. S. chrysospermum * Link. *C. Hbk. No.* 1858.
On decaying *Boleti*. July—Dec.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America. Australia.

1501. S. roseum Fr. *C. Hbk. No.* 1859.
On decaying agarics. Aug.
East. —— —— —— —— Moray ——
West. —— Clyde Argyle ——
England. Europe.

CCXCIV. FUSISPORIUM Link.

1502. F. betae Desm. *C. Hbk. No.* 1860.
On decaying beet, turnip, &c.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1503. F. aurantiacum Link. *C. Hbk. No.* 1867.
On decaying-cabbage stalks. Spring.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England. Europe. America.

CCXCV. EPOCHNIUM Link.

CCXCVI. PSILONIA Fr.

Order XXIII.—TRICHODERMACEI.

CCXCVII. PILACRE Fr.

INSTITALE Fr.

I. effusa Fr. *C. Hbk. p.* 626. *Ptycogaster albus, C. Hbk. No.* 1104.
On pine stumps. Autumn.
East. —— —— Tay Dee Moray ——
West. Solway —— —— ——
England. Europe. America.

In referring *Ptychogaster albus* to *Institale effusa*, I have not included the latter among the number of recognised genera. Dr. Cooke regards them as synonymous.

Ptychogaster albus was long ago regarded by Fries as a degeneration of *Polyporus destructor*, but, till recently, there was no confirmation of this opinion. In 1874 I gathered specimens which bore unmistakable traces of the polyporoid form, and in 1877 others, which combined more perfectly the characters of *Polyporus* and of *Ptychogaster*. Of the latter I submitted specimens to Fries and to Mr. Berkeley, who confirmed the conclusion that they represented *Ptychogaster* in true polyporoid form. Fries informed me that he had gathered specimens of *Polyporus borealis* which confirmed his

views; and he added the unqualified verdict: "Est itaque anomalum hoc genus delendum." Of one of the specimens examined by Mr. Berkeley he says, "On making a section, not only was a white, firm base discovered, but pores in the normal condition of those of the *Polyporus* in question (*Polyporus destructor*)."

Fries regarded *Ptychogaster* as an arrest, so to speak (*Ptychogaster* "in transitu ad Polyporos"), in the development of a *Polyporus*. Mr. Berkeley, on the other hand, is inclined to regard it, not as a degeneration of the *Polyporus*, but as "the work of a parasite, which modifies the matrix in the same way that *Nyctalis* and *Boletus* are affected by their peculiar parasites." The nature of the structural transformation, or, if the work of a parasite, the nature of the parasite, are questions which have yet to be determined.

I have never found and have not had an opportunity of examining *I. effusa;* but if, as Dr. Cooke holds, it is synonymous with *P. albus*, it must also be deleted from the list of genera.

CCXCVIII. ARTHRODERMA Currey.

DIVISION II.—SPORIDIIFERA.

FAMILY V.—PHYSOMYCETES.

Order XXIV.—ANTENNARIEI.

CCXCIX. ANTENNARIA Link.

CCC. ZASMIDIUM Fr

1504. Z. cellare* Fr. *C. Hbk. No.* 1879.

On walls, &c., in cellars. Jan.—Dec.

East.	——	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		
	England.	Europe.				

Order XXV.—MUCORINI.

CCCI. ASCOPHORA Tode.

1505. A. mucedo* Tode. *C. Hbk. No.* 1880.

On bread, &c.

East.	Tweed	Forth	Tay	Dee	——	——
West.	——	Clyde	——	Ross		
	England.	Europe.	America.			

CCCII. MUCOR Mich.

1506. M. ramosus Bull. *C. Hbk. No.* 1883.

On decaying fungi, &c.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Menmuir. Rev. M. L. Anderson.
England. Europe. America.

1507. M. mucedo* Linn. *C. Hbk. No.* 1884.

On decaying fruit, paste, &c.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe. America.

1508. M. caninus* Pers. *C. Hbk. No.* 1885.

On dog's dung.

East.	——	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe. America.

1509. M. fusiger* Link. *C. Hbk. No.* 1886.

On decaying agarics. Summer—Autumn.

East.	Tweed	——	Tay	Dee	Moray	——
West.	——	——	——	Ross		

England. Europe. America.

1510. M. hyalinus* Cooke. *C. Hbk. No.* 1890.

On *Vaccinium vitis-idoea.*

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

1511. M. tenerrimus Berk. *C. Hbk. No.* 1892.

On broom twigs.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.
England.

1512. M. stolonifer * Ehrb. *B. & Br. No.* 1719. *Grevillea*, vi. *p.* 127. *Rhizopus nigricans. Mycetog. t.* xi. *f.* 1-7.

Fertile threads simple, emitting root-like stolons at the base; capitulum globose, olivaceous-black; spores globose.

On decaying melon. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Gardens, 1876. James Whitton.
Europe.

CCCIII. PILOBOLUS Tode.

1513. P. crystallinus * Tode. *C. Hbk. No.* 1894.

On cow, horse, and deer dung. Summer—Autumn. 1000 ft.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1514. P. roridus * Schum. *C. Hbk. No.* 1895.

On dung. Summer—Autumn. 2200 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

CCCIV. HYDROPHORA Tode.

1515. H. stercorea * Tode. *C. Hbk. No.* 1896.

On dung.

East. —— Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

CCCV. ENDODROMIA Berk.

CCCVI. SPORODINIA Link.

1516. S. dichotoma Corda. *C. Hbk. No.* 1898.
On decaying *Russula*. Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Fern. Rev. J. Fergusson.
England. Europe.

CCCVII. ACROSTALAGMUS Corda.

1517. A. cinnabarinus Corda. *C. Hbk. No.* 1899.
On cabbage stalk.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England. Europe.

CCCVIII. HELICOSTYLUM Corda.

CCCIX. SYZYGITES Ehrb.

CCCX. ENDOGONE Link.

Order XXVI.—SAPROLEGNIEI.

CCCXI. SAPROLEGNIA Nees.

Thallus forming sporangia repeatedly at the apex. Zoogonidia mobile within the sporangium before being liberated from the investing membranes. Oogonia enfolding numerous oospores. *Rabh. Fl. Eur. Alg. p.* 275.

1518. S. ferax Gr. *Rabh. Fl. Eur. Alg. p.* 275. *Kutz. Phyc. Gen. p.* 157.

Antheridia ovate, formed from the apex of the thallus proper. The zoospores, which at length burst the membrane at the apex

of the sporangium and escape, are furnished each with two fine, hair-like flagellæ.

On living fish, flies, &c.

In various rivers, particularly in the south of Scotland.

A full description of the complex fructification of this interesting order of aquatic and parasitic plants is contained in Rabenhorst's "Flora Europæa Algarum." References to other literature of the order will be found in Cooke's "Handbook," *p.* 638. and in the volume "Fungi," published in the "International Scientific Series."

An interesting popular account of *Saprolegnia ferax*, in connection with "the Salmon disease," was published by W. G. Smith in the "Gardener's Chronicle," May 4, 1878, and reprinted in "Grevillea," *vol.* vi. *p.* 152.

FAMILY VI.—ASCOMYCETES.

Order XXVII.—ONYGENEI.

CCCXII. ONYGENA Pers.

1519. O. equina* Pers. *C. Hbk. No.* 1903.

On hoofs of horses, goats, horns, &c. June—Oct.

East. —— Forth Tay —— —— ——
West. Solway —— —— ——

England. Europe. America.

Order XXVIII.—ELLVELLACEI.

CCCXIII. MORCHELLA Dill.

1520. M. esculenta* Pers. *C. Hbk. No.* 1938. *Myc. fig.* 312.

In grassy places in woods. April—June.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America. Siberia. Kamtschatka. India. Australia. Tasmania. Cuba.

Var. **conica** Fr. Sluie. Rev. J. Keith.

1521. M. deliciosa Fr. *Sys. Myc.* ii. *p.* 8. *C. Myc. fig.* 320.

Pileus somewhat cylindrical, acute, base adnate, with strong longitudinal ribs connected by transverse wrinkles; stem even, short; asci cylindrical; sporidia broadly elliptical, ·02 × ·011 mm.; paraphyses slender, linear.

On the ground under dense shrubbery. May.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Kinburn, St. Andrews, 1878. Rev. M. L. Anderson.

Europe. India. Java.

1522. M. semilibera D. C. *C. Hbk. No.* 1941. *Myc. fig.* 321.
In thickets.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe.

CCCXIV. GYROMITRA Fr.

1523. G. esculenta * Fr. *C. Hbk. No.* 1942. *Myc. fig.* 328.
In pine and oak woods. March—June. 1300 ft.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

CCCXV. HELVELLA Fr.

1524. H. crispa * Fr. *C. Hbk. No.* 1944. *Myc. fig.* 159.
In woods and waste places. July—Nov.
East. Tweed Forth Tay —— Moray ——
West. Solway Clyde —— ——
England. Europe. America.

1525. H. lacunosa * Afz. *C. Hbk. No.* 1945. *Myc. fig.* 160.
In woods and lawns. July—Sept.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1526. H. sulcata * Afz. *C. Hbk. No.* 1946. *Myc. fig.* 161.
On gravelly soil in woods. Summer.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
New Pitsligo. Rev. J. Fergusson. Glamis. J. S.
England. Europe. America.

1527. H. elastica * Bull. *C. Hbk. No.* 1947. *Myc. fig.* 163.
In mixed woods. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Moncreiffe. J. S.
England. Europe. America.

1528. H. subcostata * Cooke. *Myc. fig.* 162. *H. costata* Afz.

Pileus deflexed, free, somewhat lobed, even, paler beneath, ribbed with veins 2½ inches broad; stem equal, ribbed longitudinally 2½ inches long; asci cylindrical; sporidia elliptical, obtuse, 1-nucleate, ·018 – ·02 × ·01 mm.; paraphyses thickened upwards.

On gravelly soil in woods. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1875. J. S.
England (Andover, 1856. Herbarium of Rev. M. J. Berkeley).

1529. H. atra König. *B. & Br. No.* 1721. *C. Myc. fig.* 167.

Fuliginous-black; pileus deflexed, flattened on both sides, free, smooth beneath; stem stuffed, clothed with furfuraceous down; asci cylindrical; sporidia elliptical, ·017 × ·008 mm.; paraphyses slightly thickened upwards.

In woods. Aug. 1500 ft.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Loch Killein. Loch Laggan. Dr. B. White.
Europe. America.

CCCXVI. VERPA Swartz.

CCCXVII. MITRULA Fr.

1530. M. cucullata * Fr. *C. Hbk. No.* 1951. *Myc. fig.* 176.

Among fir leaves.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Balmuto. Greville. Penicuik. J. S.
England. Europe. America.

1531. M. paludosa Fr. *C. Hbk. No.* 1952. *Myc. fig.* 175.

On leaves, &c., in ditches. April—June.

East. Tweed Forth Tay Dee Moray ——
West. Solway —— —— ——
England. Europe. America.

CCCXVIII. SPATHULARIA Pers.

1532. S. flavida * Pers. *C. Hbk. No.* 1953. *Myc. fig.* 342.

In woods, especially fir. July—Nov. 1200 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——
England. Europe. America. Siberia.

CCCXIX. LEOTIA Fr.

1533. L. lubrica * Pers. *C. Hbk. No.* 1954. *Myc. fig.* 171.

In damp places in woods. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America. India. Himalayas. Tasmania.

1534. L. circinans * Pers. *B. & Br. No.* 1617. *C. Myc. fig.* 172.

Gregarious, subcæspitose, or deposited in rings; pileus fleshy, convex, at length undulate, margin involute, beneath with nerves which are decurrent on the stem; stem fistulose, somewhat pulverulent; asci clavate; sporidia linear, straight or curved, nearly equal in length to the asci, ·05 – ·06 mm. long; paraphyses filiform.

In spruce fir wood. Aug.—Sept.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
Glamis, Cram's Hill, 1874. J. S. Rothiemurchus, 1879. Rev. J. Keith.
Europe. America.

1535. L. Stevensoni * B. & Br. *No.* 1827.

Short, densely cæspitose; pileus and stem green.
This has a very different habit from *L. lubrica*, and approaches *L. atro-virens*. There does not appear to be any decided difference in the fruit.

On damp ground in wood. Sept.—Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, Hunter's Hill, 1877. J. S.

CCCXX. VIBRISSEA Fr.

1536. V. truncorum * Fr. *C. Hbk. No.* 1955.

On wet wood. May—Aug. 1200 ft.

East. —— —— Tay Dee —— ——
West. —— —— Argyle ——

England. Europe. America.

1537. V. Margarita White. *B.&Br. No.* 1477. *Scot.Nat.*ii.*p.*218.

Simple; head orbicular, orange-vermilion, margin hispid; stem cylindrical, hirsute with black articulated hairs, internally whitish-cinereous.

The stems are simple, varying from 2 lines to ½ inch in height, "springing from complicated threads," and covered with black jointed hairs or fibres; at the junction with the head the stem is less hairy, and paler in colour; internally it is solid and greyish-white. The head is flattened-orbicular (sometimes concave in the middle), and of a beautiful orange-vermilion in colour; the margin has a fringe of close appressed hair of the same character as those of the stem; underneath the head is paler in colour at the junction with the stem.

On dead sticks of heather in water. Sept.—Oct. 2200 ft.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Braemar, Mòr Shròn (Morrone); 1873. Rannoch.
Glen Tilt. Dr. B. White.

1538. V. microscopica B. & Br. *No.* 1618.

Very minute; stem very short, back; head grey, leaving a cup-shaped depression when completely washed off; sporidia ejected, filiform.

On damp fir wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.

1539. V. Guernisaci Crouan. *Ann. des Sc. Nat. vol.* vii., 1857, *c.* i.

Very small, 1–3 mm. in diameter, sessile, gelatinous, lentiform or turbinate, slightly brown beneath; hymenium plane or convex, white, greenish-yellow or ochrey-yellow, pale grey or bluish grey; asci usually straight, containing eight uncoloured sporidia, which are long, filiform, curved, much attenuated, and excessively slender; paraphyses numerous, articulated, presenting one to three chain-like bifurcations, the terminal cells being round or pear-shaped, and larger than the others; sporidia about ·0038 inch long. *Grevillea*, iv. *p.* 120.

On willow and alder sticks in wet places. Spring.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sanquhar, Greeshop, &c. Rev. J. Keith.
England. Europe.

CCCXXI. GEOGLOSSUM Pers.

1540. G. viride* Pers. *C. Hbk. No.* 1956. *Myc. fig.* 14.
In woods on damp soil. Aug.—Nov.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. Himalayas.

1541. G. glutinosum Pers. *C. Hbk. No.* 1958. *Myc. fig.* 6.
In grassy places on marshy ground. Sept.
East. —— —— Tay —— —— ——
West. —— —— Argyle ——
England. Europe.

1542. G. viscosum Pers. *C. Hbk. No.* 1959. *Myc. fig.* 10.
In moist meadows, pastures, &c. Autumn.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Foxhall, Edinburgh. Greville. Sc. Crypt. Fl.
England. Europe.

1543. G. glabrum* Pers. *C. Hbk. No.* 1960. *Myc. fig.* 9.
In grassy places. July—Nov.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Himalayas. Australia. Tasmania.

1544. G. hirsutum* Pers. *C. Hbk. No.* 1961. *Myc. fig.* 3.
In grassy places. Aug.—Nov.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Australia. New Zealand. Cuba. Java. Mauritius. Bourbon.

1545. G. difforme* Fr. *C. Hbk. No.* 1692. *Myc. fig.* 7.
Among grass and moss. Sept.—Oct. 1000 ft.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1546. G. tremellosum Cooke. *Myc. fig.* 347.

Smooth, tremellose, black, contiguous, club somewhat compressed, hollow; stem even, glutinous, of the same colour; asci clavate; sporidia fusiform, straight or slightly curved, hyaline, ·03–·032 × ·005 mm., at length very faintly 5–7 septate, or perhaps only with the endrochrome so divided; paraphyses linear.

On the ground.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.

CCCXXII. RHIZINA Fr.

1547. R. undulata* Fr. *C. Hbk. No.* 1963.

On light or sandy soil. Aug.—Nov.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Glamis, Cram's Hill, 1877. J. S. Forres. Rev. J. Keith.

England. Europe. America. Siberia.

CCCXXIII. PEZIZA Dill.

I.—ALEURIA Fr.

1.—MACROPODES.

1548. P. acetabulum* L. *C. Hbk. No.* 1964. *Myc. fig.* 183.

On gravelly soil. Spring—Summer.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

1549. P. macropus* Pers. *C. Hbk. No.* 1965. *Myc. fig.* 188.

On the ground in woods. July—Sept.

East. —— Forth Tay Dee Moray ——
West. —— Clyde. Argyle ——

England. Europe. America.

1550. P. tuberosa Bull. *C. Hbk. No.* 1966.

On the ground in woods. Spring.

East. Tweed —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

1551. P. Percivali * B. & C. *C. Myc. fig.* 192. *P. ciborium* Fr. *B. & Br. No.* 1479, and sub. 1721.

Solitary; cup at length expanded, somewhat pruinose, margin narrowly inflexed, 1½ inch broad; stem rather thick, somewhat attenuated downwards, terminated by a few rooting fibrils, 1–1½ inch long, ¼ inch and more thick; asci clavato-cylindrical; sporidia (elliptical?); paraphyses thickened upwards, brownish.

On lawn under lime trees. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle, 1874. J. S.
England. Scandinavia.

1552. P. ammophila D. R. & M. *C. Myc. fig.* 100, 373.

Stipitate, turbinate, fragile, rooting, mouth torn and toothed in a triangular manner, 1 inch high and broad, internally fuscous, at length umber, externally pallid, full of sand; stem elongated, rooting, 2–3 inches long, very fragile; asci cylindrical; sporidia elliptical, hyaline, ·02 × ·006 mm.; paraphyses slightly thickened.

Immersed in sand at the roots of *Psamma*. Coast.

East. —— —— Tay —— —— ——
West. —— —— —— ——

St. Andrews. Rev. M. L. Anderson.
Algeria. Europe (France).

1553. P. insolita * Cooke. *Myc. fig.* 375.

Stipitate, fleshy, fragile, whitish, clavate, then pyriform, at length cup-shaped, cups 1 inch high, ½ inch or more in diameter, cells of cups ·012 × ·01; stem thick, attenuated beneath; hymenium ochraceous-white; asci cylindrical; sporidia elliptical, hyaline, ·022—·025 × ·01—·012 mm.; paraphyses filiform, shorter than the asci, septate.

A white mycelium runs among the leaves on which it grows.

On decayed leaves among mould in fig-house. Dec.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Gardens, 1877. J. S.

2.—COCHLEATAE.

1554. P. venosa * Pers. *C. Hbk. No.* 1968. *Myc. fig.* 228, 372.

On the ground. April—May.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1555. P. badia Pers. *C. Hbk. No.* 1969. *Myc. fig.* 226.

On wet ground. Summer—Autumn.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America.

1556. P. reticulata Grev. *Sc. Crypt. Fl.* iii. *t.* 156. *C. Myc. fig.* 227.

Large, internally tawny rufescent, plicate in the centre, reticulate, externally whitish, pruinose; cup involute at the margin, at first entire, then variously torn, subrepand, 2–5 inches broad; stem either short, thick, or almost none; asci cylindrical; sporidia elongato-elliptical, ·023 × ·01 mm.; paraphyses clavate above, filled with brownish granules.

This was formerly referred to *P. venosa*, but has been separated by Dr. Cooke, who points out that the odour of Greville's plant is by no means so powerful and nitrous as that of *P. venosa*, that the colour is lighter, the substance less tough, sporidia more constant, and different in size and form.

On the ground in fir wood. Spring.

East. —— Forth —— —— Moray ——
West. —— —— —— ——
Foxhall, Edinburgh. Greville. Rafford. Rev. J. Keith.
Europe.

1557. P. cochleata * Bull. *C. Hbk. No.* 1971. *Myc. fig.* 212.

In grassy places in woods. Aug.—Sept.

East. —— Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America. Australia.

1558. P. succosa Berk. *C. Hbk. No.* 1972. *Myc. fig.* 243.

On river banks, &c. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Banks of Findhorn. Rev. J. Keith.
England. America.

1559. P. leporina Batsch. *C. Hbk. No.* 1973. *Myc. fig.* 211.

On the ground in woods and on lawns.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1560. P. onotica* Pers. *C. Hbk. No.* 1974. *Myc. fig.* 210.
On the ground in woods. Aug.—Oct.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

1561. P. aurantia* Vahl. *C. Hbk. No.* 1975. *Myc. fig.* 203.
On the ground in woods and lawns. July—Nov.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Australia.

1562. P. luculenta Cooke. *Myc. fig.* 208.
Sessile, fleshy, beautifully orange; cups concave, externally fibrillose, paler, scarcely an inch broad; asci cylindrical; sporidia elliptical, obtuse, binucleate, even, ·025 × ·012 mm.; paraphyses clavate upwards, filled with orange granules.
On the ground. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Dunkeld. Dr. B. White.
England.

1563. P. Adae Sadl. *Trans. B. S. Ed.*, 1877, *p.* 45. *C. Myc. fig.* 349.
Sessile, somewhat cæspitose; cup ear-shaped, irregular, at length expanded, margin entire or lobed, reflexed, ⅛ to 2 inches in diameter; hymenium white, pale rose, violet, or ochraceous; asci cylindrical; sporidia elliptical, binucleate, ·0125 × ·007 mm.; paraphyses linear. Disc variable in form and colour, but always thin and delicate.
On damp walls, &c.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Inverleith House. J. Sadler.
England (London). Europe (Brussels).

3.—CUPULARES.

1564. P. repanda Wahl. *C. Hbk. No.* 1978. *Myco. fig.* 240.
On the ground.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America. Australia. Cuba.

1565. P. cerea* Sow. *C. Hbk. No.* 1979. *Myc. fig.* 244.
On the ground. March—Nov.
East. —— Forth Tay —— —— ——
West. Solway —— —— ——
England. Europe. America.

1566. P. vesciculosa* Bull. *C. Hbk. No.* 1980. *Myc. fig.* 242.
On soil in hotbeds, &c. April—Sept.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1567. P. micropus Pers. *C. Hbk. No.* 1983. *Myc. fig.* 300.
On stumps.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Menmuir. Rev. M. L. Anderson.
England. Europe. America.

1568. P. pustulata* Pers. *C. Hbk. No.* 1986. *Myc. fig.* 298.
On the ground. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

1569. P. cupularis* Linn. *C. Hbk. No.* 1990. *Myc. fig.* 286.
On grassy ground. Oct.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

1570. P. cribrosa Grev. *C. Myc. fig.* 381. *Helotium B. C. Hbk. No.* 2149.
On sandy ground among short grass. Autumn.

This—*Peziza cribrosa* of English Flora—was afterwards referred by Berkeley to *Helotium*. It has been restored to *Peziza* by Cooke, chiefly on account of the sporidia. The figures in "Mycographia" are taken from the original specimens. It was discovered by Greville and Hooker in 1821, in crossing from the West Coast to Inverness, and afterwards was found by Greville at Balmuto near Edinburgh. It has not, so far as I am aware, been met with since.

4.—HUMARIA.

1571. P. rutilans* Fr. *C. Hbk. No.* 1994. *Myc. fig.* 57.
On the ground in wood. Sept.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Australia.

1572. P. melaloma * A. & S. *C. Hbk. No.* 1995. *Myc. fig.* 67.
On charred log. Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1573. P. polytrichi Schum. *C. Hbk. No.* 1997. *Myc. fig.* 50.
On heaths.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1574. P. fusispora Berk. *B. & Br. No.* 1481. *Myc. fig.* 32.
Gregarious, somewhat crowded, sessile; cups hemispherical, plane, or slightly concave, yellow, tomentose, 2–5 mm. broad; asci cylindrical; sporidia slightly attenuated at either extremity, fusiform, binucleate, ·03–·032 × ·01 mm.
Var. **Scotica** Rabenh.
Varying from nearly white to orange or blood-red.
On heath and turfy ground. Dec.
East. Tweed —— Tay Dee —— ——
West. —— —— ——
England. Tasmania.
Var. **aggregata** * B. & Br. *C. Hbk. No.* 1998. *Myc. fig.* 31.
On waste ground. Oct.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England.

1575. P. subhirsuta * Schum. *C. Hbk. No.* 1999. *Myc. fig.* 66.
On naked soil, and refuse. Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1576. P. leucoloma Hedw. *C. Hbk. No.* 2000. *Myc. fig.* 28.
On wall tops among moss. Sept.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe. America.

1577. P. humosa Fr. *C. Hbk. No.* 2001. *Myc. fig.* 25.
On the ground among moss.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

1578. P. granulata * Bull. *C. Hbk. No.* 2005. *Myc. fig.* 59.

On cow dung. Aug.—Nov. 2400 ft.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	Argyle	Ross		

England. Europe. America. Ceylon.

1579. P. vivida Nyl. *Grevillea*, iii. *p.* 120. *Myc. fig.* 53.

Somewhat stipitate, scattered or gregarious, fleshy, cup-shaped, somewhat deeply hollowed out, becoming reddish-fuscous, externally paler, flocculose, margin quite entire, acute, 5 mm. broad; asci cylindrical-clavate; sporidia elliptical, delicately granulated, ·023 × ·012 mm.

A specimen is in the Edinburgh Herbarium under the name of *P. leucoloma.*

Among moss.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Rannoch. Dr. B. White.

England. Europe.

1580. P. exidiiformis * B. & Br. *No.* 1480. *Myc. fig.* 60.

Gregarious, orbicular, lurid purple, margin elevated, inflexed, cups 4–5 mm. broad or more; stem thickened upwards; asci cylindrical; sporidia broadly elliptical, binucleate, ·017 × ·01 mm.; hymenium cribrose; paraphyses slightly clavate.

On sandy ground. Oct.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Cram's Hill, 1877. J. S.

England. Ireland.

1581. P. constellatio * B. & Br. *No.* 1620. *Myc. fig.* 81.

Scattered, sessile, somewhat fleshy, smooth, hollow, at length flattened, red to vermilion, margin quite entire, cups 1–2 mm. broad; asci cylindrical; sporidia globose, even, ·013–·014 mm. diameter; paraphyses linear, slightly curved at the tips, filled with orange granules.

On naked soil. Sept.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Cram's Hill, 1877. J. S.

England. Europe.

1582. P. maurilabra * Cooke. *Grevillea*, vi. *pp.* 64, 75. *Myc. fig.* 388.

Sessile, fleshy; cups concave, at length with the margin crisped, crenulate, externally black-brown, channelled, 3–5 mm. broad; hymenium becoming flesh-red, or somewhat orange; asci cylindrical; sporidia elliptical, binucleate, ·017 – ·02 × ·007 – ·009 mm.; paraphyses clavate, on one side or other forked.

Cells of the cup large, agglutinated together at the margin.

On the ground among moss. Oct.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Cram's Hill, Oct. 10, 1877. J. S.
Europe (Viller's Cotterets, Oct. 20, 1877).

1583. P. macrocystis * Cooke. *Myc. fig.* 63.

Gregarious or scattered, cup-shaped, then flattened; cup externally brown, smooth, or slightly granulose, 2–4 mm. broad; hymenium concave, orange-red; margin entire, raised; asci cylindrical; sporidia narrowly ellipsoid, binucleate, ·02 × ·009 mm.; paraphyses club-shaped towards the apex, filled with orange granules.

On the ground. Sept.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Cram's Hill, 1877. J. S.
England.

1584. P. ollaris * Fr. *Sys. Myc.* ii. *p.* 68. *Myc. fig.* 56.

Sessile, crowded, hemispherical, then flattened, whitish-pubescent towards the margin, 1 c.m. broad; hymenium orange-yellow, externally paler; asci cylindrical; sporidia ellipsoid, uniguttulate, ·028 – ·03 × ·008 mm.; paraphyses thickened towards the apex.

On naked soil. Sept.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Cram's Hill, 1877. J. S.
England. Europe. America.

1585. P. convexula * Pers. *Fr. Sys. Myc.* ii. *p.* 73. *Myc. fig.* 36.

Immersed, plane then convex, somewhat immarginate, smooth, flesh-ochraceous, 2 mm. broad; asci cylindrical; sporidia ellipsoid, binucleate, hyaline, ·022 × ·011 mm.; paraphyses septate, thickened towards the apex.

On the ground among moss. Sept.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis, Cram's Hill, 1877. J. S.
England. Europe. America.

1586. P. bovina Phil. *In litt.*

Gregarious, sessile, with obconic base, expanded, umber-colour: disc umbilicate, waved, with paler margin; asci cylindrical; sporidia 8, oblong-ovate; paraphyses scarce or none. Cups 8–12 mm. across; exterior cells of the cup very large, 8 mm. in diameter. Sporidia ·019 × ·009 mm. W. P.

On cow dung. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.

1587. P. cervaria * Phil. *In litt.*

Gregarious or crowded, sessile, thick in the centre, thin at the crenulate margin, chestnut-brown; disc concave, waved; asci broadly cylindrical, abruptly narrowed at the base; sporidia 8, oblong-ovate; paraphyses linear, forked at the summits, abundant. Cups 1–4 mm. across. Sporidia ·015 × ·007 mm.

This species closely resembles *P. hepatica* Batsch., but differs in having much smaller sporidia, and slenderer paraphyses which are not thickened at the apices, and are forked. W. P.

On roe-deer's dung. July—Aug.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith. Glamis, 1879. J. S.

1588. P. Keithii Phil. *In litt.*

Gregarious or crowded, sessile, thick, turbinate, then expanded, dull salmon-colour, smooth; disc nearly plane, margin obtuse; asci broadish clavato-cylindrical; sporidia 8, oblong ovate; paraphyses scarce or none. Cups 5–8 mm. across, external cells small, ·01 mm. diameter. Sporidia ·015–·018 × ·007 mm.

This species has an outline much commoner amongst the *Ascoboli* than the *Peziza*, being thick and fleshy, with the hymenium only slightly depressed, the form of a flattened sphere. W. P.

On horse dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Waterford. Rev. J. Keith.

II.—LACHNEA Fr.

1.—SARCOSCYPHA.

1589. P. coccinea Jacq. *C. Hbk. No.* 2012. *Myc. fig.* 95.

On dead branches. Feb.—March.

East. Tweed Forth —— —— Moray ——
West. Solway Clyde Argyle ——

England. Europe. America. Teneriffe.

1590. P. melastoma Sow. *C. Hbk. No.* 2013. *Myc. fig.* 103.
On fallen oak branches. April.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe.

1591. P. pygmea Fr. *C. Hbk. No.* 2014.
On dead wood.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Broomhill. Rev. J. Keith.
England. Europe.

1592. P. radiculata Sow. *C. Hbk. No.* 2015. *Myc. fig.* 99.
In fir wood.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe.

1593. P. hemispherica * Wigg. *C. Hbk. No.* 2016. *Myc. fig.* 115.
On the ground in woods. Aug.—Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1594. P. brunnea A. & S. *C. Hbk. No.* 2020. *Myc. fig.* 126.
On the ground.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Menmuir. Fern. Rev. J. Fergusson.
England. Europe. America.

1595. P. hirta Sch. *C. Hbk. No.* 2021. *Myc. fig.* 128.
On the ground and stumps. Aug.—Oct.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Cuba. Ceylon.

1596. P. trechispora * B. & Br. *C. Hbk. No.* 2022. *Myc. fig.* 129.
On bare damp soil in woods. Aug.—Sept.
East. —— —— Tay Dee —— ——
West. Solway —— —— ——
England. Europe.

1597. P. vitellina Pers. *C. Hbk. No.* 2023. *Myc. fig.* 143.

On the ground. Autumn.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.

England. Europe.

1598. P. umbrata Fr. *C. Hbk. No.* 2024. *Myc. fig.* 137.

On the ground.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Berwick. Johnstone.

Europe.

1599. P. scutellata * Linn. *C. Hbk. No.* 2025. *Myc. fig.* 131.

On damp wood. Sept.—Nov. 1500 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle ——

England. Europe. America. Java.

1600. P. livida Sch. *C. Hbk. No.* 2027. *Myc. fig.* 139.

On fir chips.

East. —— —— —— —— —— ——
West. Solway —— —— ——

Lockerbie. Sir W. Jardine, Bart.

England. Europe.

1601. P. stercorea * Pers. *C. Hbk. No.* 2028. *Myc. fig.* 147.

On cow dung. Spring—Autumn.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross

England. Europe. America. Arctic. Falkland Islands. Tasmania.

1602. P. theleboloides A. & S. *C. Hbk. No.* 2029. *Myc. fig.* 151.

On leaf mould. Oct.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Edinburgh Fungus Show, 1878.

England. Europe. America.

1603. P. albo-spadicea Grev. *C. Hbk. No.* 2030. *Myc. fig.* 141.

On bare soil in moist woods. Autumn.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Foxhall, Edinburgh. Greville. Fl. Ed.
America.

1604. P. Dalmaniensis Cooke. *Grevillea*, iii. *p.* 66. *Myc. fig.* 153.

Sessile, fleshy, cup hemispherical, at length expanded, 1 c.m. broad, bright yellow, margin elevated, beset with erect hairs (·6 mm. long, septate) of the same colour; asci cylindrical; sporidia elliptical, even, ·012 × ·007 mm.; paraphyses narrowly clavate above.

On the ground in woods. Sept.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Dalmeny. Dr. M. C. Cooke.
England.

1605. P. coprinaria Cooke. *Grevillea*, iv. *p.* 91. *Myc. fig.* 149.

Somewhat gregarious, sessile, fleshy, orange red or scarlet, hemispherical, then flattened; 1 c. m. broad, external cells very large; margin elevated, clothed with pallid fuscous, septate hairs ½ mm. long, mixed with others that are shorter, mostly confined to the margin, not branched or stellate; asci cylindrical; sporidia elliptical, even, ·018–·02 × ·01 mm.; paraphyses clavate above, filled with orange granules.

On dung.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.

1606. P. cretea Cooke. *Trans. B. S. Ed.*, 1877, *p.* 46. *Myc. fig.* 362.

Somewhat gregarious, sessile; cups hemispherical, at length flattened, 2–5 mm. broad, externally, and at the margin, clad with erect, brown hairs, external hairs straight, attenuated upwards, ·15–·2 mm. long; disc chalky white; asci cylindrical; sporidia elliptical, hyaline, ·012–·018 × ·008 mm.; paraphyses linear.

On plaster walls and ceiling exposed after burning.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Inverleith House. Professor J. H. Balfour.

2.—DASYSCYPHA.

1607. P. ciliaris Schrad. *C. Hbk. No.* 2031.

On dead leaves.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1608. P. virginea * Batsch. *C. Hbk. No.* 2032.

On sticks, &c. Spring—Autumn. 2400 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America.

1609. P. nivea* Fr. *C. Hbk. No.* 2033.

On sticks, stumps, &c. Jan.—Nov. 2000 ft.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1610. P. calycina* Schum. *C. Hbk. No.* 2034.

On fir sticks. July—Dec. 2900 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

Var. **abietis.** Appin. Carmichael.

Var. **laricis.*** Glamis. J. S.

1611. P. subtillissima Cooke. *Grevillea*, iii. *p.* 121.

Externally scarcely distinguishable from *P. calycina* Sch. Asci subclavate; sporidia cylindrical, curved, minute, hyaline, ·009 mm. long.

On fir bark.

East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.

1612. P. bicolor* Bull. *C. Hbk. No.* 2035.

On dead twigs, oak, &c. Jan.—Aug.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1613. P. cerina* Pers. *C. Hbk. No.* 2036.

On dead wood. April—Nov.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

1614. P. calyculaeformis Schum. *C. Hbk. No.* 2037.

On dead wood. May.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Mossburnford. A. Jerdon.
England. Europe.

1615. P. clandestina* Bull. *C. Hbk. No.* 2038.

On dead bramble stem. April.

East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America.

1616. P. crucifera Phil. *Gard. Chron.*, 1878, *p.* 397, *fig.* 71.

Minute, gregarious, stipitate, white; cups at first globose, then expanded, clothed with short, septate, white hairs, with clavate summits crowned with cruciform crystals; stem rather long, villous to the base; asci cylindrato-clavate; sporidia 8, cylindrical, or narrowly fusiform, straight, ·006 – 8 × ·001 mm.; paraphyses as broad but longer than the asci, acutely pointed. Whole plant about ·5 mm. high.

On twigs of *Myrica gale* beneath the bushes. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
England.

1617. P. palearum Desm. *Ann. Sc. Nat.* 1846.

Minute, scattered, stipitate, whitish tawny, acetabuliform, then plane, externally furfuraceo-tomentose, ciliated round the margin; disc ivory; stem rather long, dark brown at the base; asci small, cylindrical; paraphyses large, acute at the summits; sporidia ·01 – ·013 × ·002 mm.

On stems of grass. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
England. Europe.

1618. P. caulicola* Fr. *C. Hbk. No.* 2039.
On dead herbaceous stems, &c. July.

East.	Tweed	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

1619. P. albo-violascens A. & S. *C. Hbk. No.* 2040.
On branches, rotten wood, &c.

East.	Tweed	——	Tay	——	——	——
West.	——	——	Argyle	——		

England. Europe. America.

1620. P. corticalis* Pers. *C. Hbk. No.* 2041.
On oak bark. March.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

1621. P. melaxantha Fr. *C. Hbk. No.* 2043.
On fallen branches.

East.	——	——	——	——	——	——
West.	——	——	Argyle	——		

Appin. Carmichael.
Europe. America.

1622. P. Schumacheri* Fr. *C. Hbk. No.* 2045.
On dead wood. Dec.

East.	Tweed	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

Var. **plumbea*** Johnstone. Greville. Rev. J. Keith. J. S.

1623. P. rufo-olivacea A. & S. *C. Hbk. No.* 2046.
On dead bramble, whin, and broom.

East.	——	——	——	——	Moray	——
West.	——	——	Argyle	——		

England. Europe. America.

1624. P. variecolor* Fr. *C. Hbk. No.* 2048.
On decorticated oak. Feb.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

1625. P. episphaeria Mart. *C. Hbk. No.* 2049.
On *Hypoxylon multiforme*, &c.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe.

1626. P. pineti Batsch. *C. Hbk. No.* 2050.
On fir cones.
East. —— —— —— Dee Moray ——
West. —— —— —— ——
England. Europe.

1627. P. papillaris Bull. *C. Hbk. No.* 2051.
On dead wood.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Menmuir. Rev. M. L. Anderson.
England. Europe.

1628. P. hyalina* Pers. *C. Hbk. No.* 2052.
On dead wood. Jan.
East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1629. P. sulphurea Pers. *C. Hbk. No.* 2053.
On dead nettle stems, &c.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1630. P. plano-umbilicata Grev. *C. Hbk. No.* 2054.
On dead nettles, *Angelica*, &c. Summer—Autumn.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
Edinburgh. Greville. Jedburgh. A. Jerdon.

1631. P. Grevillei Berk. *C. Hbk. No.* 2056.
On dead *Umbelliferæ*.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——

1632. P. apala B. & Br. *C. Hbk. No.* 2060.

On dead rushes.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

England. Europe.

1633. P. ilicinicola B. & Br. *C. Hbk. No.* 2064.

On holly. Nov.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Dunphail. Rev. J. Keith.
England.

1634. P. diminuta * Rob. *Desm. Ann. Sc. Nat.*, 1847, viii. 185.

Very small, scattered or crowded, shortly stipitate, externally whitish, tomentose, at first globose, then open, hemispherical; disc concave, yellowish or orange (½ mm.); asci clavato-cylindrical; sporidia oblong. *Grevillea*, iii. *p.* 184.

On dead stem of rush.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill. J. S.
Europe.

1635. P. flammea A. & S. *Consp. p.* 319, *t.* 11, *f.* 7.

Gregarious or scattered, sessile, hemispherical, strigoso-villous, dull red throughout; sporidia oblong, simple, or spuriously uniseptate, ·01-·016 × ·0025-·0035 mm.; paraphyses slender. *Grevillea*, iv. *p.* 121.

On dead branches of *Salix aurita*. Jan.—Dec.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Alvie. Aviemore. Dunphail. Rev. J. Keith.
Europe.

1636. P. escharodes B. & Br. *No.* 1322, *Pl.* xix. *fig.* 15.

Cup sessile, wrinkled, rough with short whitish flocci, at first closed, globose, ·03 inch in diameter, dingy olivaceous-green, margin pallid, fringed with delicate flocci, quite black when the hairs have vanished; hymenium cinereous; sporidia fusiform, sometimes binucleate, ·0004 inch (·01 mm.) long.

On stems of bramble. March.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.
England.

1637. P. stereicola Cooke. *Grevillea*, i. *p.* 130.

Gregarious, minute ; cups globose, then cup-shaped, between fleshy and waxy, externally woolly, of a delicate rose-pink when dry, disc of the same colour; asci subclavate ; sporidia minute, cylindrical, obtuse (·00025 × ·00005 inch) ·007 × ·0015 mm.

On the hymenium of *Stereum.*
Edinburgh Herbarium.

1638. P. œdema Desm. *Ann. Sc. Nat.* 1850.

Hypophyllous, sessile, very minute, somewhat crowded, globose, slightly pubescent, greyish-white, subtremellose, cups seated on a brown tuberous subiculum ; asci minute, claviform, often curved.

The tuberous subiculum mentioned by Desmazieres is a *Phragmidium* on which this pretty little species grows in crowded groups. W. P.

On dead leaves of *Rubus.* Spring.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
Europe. North Wales.

1639. P. leuconica * Cooke. *In litt.*

White; cups sessile, minute, scattered, clad externally at the margin with smooth-pointed hairs, ·25 mm. long; sporidia linear ·008 × ·002 mm.; paraphyses filiform.

On fir wood of old sheep fence. July. 2900 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Clova, 1878. J. S.

3.—TAPESIA.

1640. P. aurelia * Pers. *C. Hbk. No.* 2065.

On dead oak. Jan.—April.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1641. P. caesia * Pers. *C. Hbk. No.* 2068.

On decaying oak. Nov.—June.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——

Appin. Carmichael. Glamis. J. S.
England. Europe. America.

1642. P. rosae Pers. *C. Hbk. No.* 2073.
On branches of rose.
East. Tweed —— Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe. America.
Var. **prunorum.** On sloe. Sanquhar. Rev. J. Keith.

1643. P. fusca * Pers. *C. Hbk. No.* 2074.
On dead alder and heather. April—Nov. 2800 ft.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

1644. P. Johnstoni Berk. *C. Hbk. No.* 2075.
On fallen branches.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1645. P. rudis Berk. *C. Hbk. No.* 2077.
On gravel and peat. June.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Berwick. Johnstone.

1646. P. bolaris Batsch. *C. Hbk. No.* 2078.
On willow and holly. Autumn.
East. —— —— —— —— Moray ——
West. —— —— Argyle ——
Europe. America.

1647. P. ledi A. & S. *C. Hbk. No.* 2080.
On *Arbutus uva-ursi.* Sept.
East. —— —— —— —— ——
West. —— —— Argyle ——
Glencoe, 1838. C. Babington.
Europe.

1648. P. leptospora B. & Br. *C. Hbk. No.* 2081.
On decayed wood.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.

III.—PHIALEA Fr.

1.—HYMENOSCYPHA.

1649. P. firma* Pers. *C. Hbk. No.* 2082.

On dead branches. Autumn—Winter.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America. Teneriffe.

1650. P. Curreiana Tul. *C. Hbk. No.* 2083.

On dead rush. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1651. P. ciborioides* Fr. *C. Hbk. No.* 2084.

On beech leaves. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

1652. P. coronata Bull. *C. Hbk. No.* 2086.

On dead stems of artichoke, &c.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1653. P. inflexa* Bolt. *C. Hbk. No.* 2087.

On herbaceous stems. Oct.

East. —— Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

1654. P. Persoonii* Moog. *C. Hbk. No.* 2088.

On dead *Equisetum.* June—Oct.

East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe.

1655. P. striata * Fr. *C. Hbk. No.* 2089.
On dead stem of mint. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

1656. P. cyathoidea * Bull. *C. Hbk. No.* 2092.
On dead stems of *Angelica* and reed. June. 2200 ft.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

Var. **solani** Pers. *Fr. Sys. Myc.* ii. *p.* 124.
On withered potato stems.
Forres. Rev. J. Keith.

Var. **clavata.** *P. clavata* Pers.
On dead stems of *Pteris aquilina.*
Altyre. Rev. J. Keith.

Mr. Phillips regards *P. clavata* Pers. as a variety of *P. cyathoidea.* He says Mr. Keith's specimens agree with the description, and with specimens published by S. C. Sommerfelt in *Plantarum Cryptogamarum Norvegicarum, No.* 188, also with karsten's description in *Mycologia Fennica*, Part i. *p.* 125. They differ in no essential feature from *P. cyathoidea*, and should stand as a variety of that species.

1657. P. caucus Reb. *C. Hbk. No.* 2093.
On fallen sallow catkins. Spring.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Moncreiffe. Dr. B. White.
England. Europe. America.

P. amentacea Balb. *Grevillea*, vi. *p.* 23. *Phil. El. Brit. No.* 116.

Sporidia ·012 × ·0055 mm. Scarcely distinguishable from *P. caucus.*
On catkins of willow. Spring. D. B. White.

1658. P. imberbis Bull. *C. Hbk. No.* 2094.
On willow.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Mossburnford. A. Jerdon.
England. Europe.

1659. P. strobilina Fr. *Sys. Myc.* ii. *p.* 125. *B. & Br. No.* 1483.

Pyriform, firm, cup concave, pallid rufescent, margin swollen, quite entire; stem short, black. Sporidia oblong, or fusiform, simple, ·0·008 – ·0012 × ·00025 mm.

The whole cone is sometimes covered with a floccose, furfuraceous subiculum.

On fir cones. Locality unrecorded.
England. Europe.

1660. P. monilifera Fckl. *Symb. Myc.* 310.

Stipitate, scattered, or cæspitose; cups 1–2 mm. broad, 1–3 mm. high, seated amongst *Bispora*, at first subclavate, at length dilated; disc concave, patellate when mature, marginate, waxy, externally and rather long stem smooth, pallid brown; disc slightly darker; asci elongated; sporidia biseriate, oblong, attenuated towards each end, but obtuse, at length uniseptate, hyaline, ·012 × ·004 mm.; paraphyses filiform, subclavate. *Grevillea*, iv. *p.* 111.

Among *Bispora monilioides* on cut timber.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dupplin Castle. Dr. M. C. Cooke.
Europe.

1661. P. vexata De Not. *Disco. p.* 26.

Small, scattered, stipitate, pallid-white or rosy-white, cupulate, perpendicularly striate, margin fimbriate; hymenium brick-red; stem rather stout, passing insensibly into the cup; asci cylindraceo-clavate; sporidia 8, fusiform, obtuse at the ends, triseptate, biseriate, paraphyses linear, enlarged at the apices, occasionally branched.

On stems of grass. July.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Manachie. Rev. J. Keith.
Europe.

1662. P. concolor Phil. *In litt.*

Gregarious, stipitate, pallid or dirty white, firm, thin, hemispherical, roughish; margin minutely fimbriate; asci cylindraceo-clavate; sporidia 8, oblong, rounded at the ends, simple; paraphyses filiform. Cups ¼–1 mm. across. Sporidia ·008–·01 × ·002–·003 mm.

This species is allied to the group of which *P. cyathoidea* is the type, but verging towards the section *Dasyscypha* on account of its rough exterior and slightly fimbriate margin. W. P.

On a hard stick. April.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.

2.—MOLLISIA.

1663. P. clavus A. & S. *C. Hbk. No.* 2096.
On dead branches. April.
East. Tweed —— Tay Dee —— ——
West. —— —— Argyle ——
England. Europe. America. Ceylon.

1664. P. atro-virens* Pers. *C. Hbk. No.* 2099.
On decaying decorticated wood. July—Aug.
East. —— Forth Tay —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

1665. P. cinerea* Batsch. *C. Hbk. No.* 2100.
On dead wood. March. 2900 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Ceylon.

1666. P. sphaerioides Pers. *C. Hbk. No.* 2105.
On *Lychnis dioica.*
East. Tweed —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe.

1667. P. axillaris Nees. *C. Hbk. No.* 2106. *Myc. fig.* 91.
On *Sphagnum mnioides.* Aug. 2600 ft.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

1668. P. xanthostigma* Fr. *C. Hbk. No.* 2107.
On rotten oak and fir. Nov.
East. Tweed —— Tay —— —— ——
West. —— —— Argyle ——
England. Europe.

1669. P. leucostigma* Fr. *C. Hbk. No.* 2108.
On rotten wood. May. 2800 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1670. P. ulmariae Lasch. *C. Hbk. No.* 2109.
On dead stems of *Spiræa ulmaria.* Spring.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England. Europe.

1671. P. vulgaris* Fr. *C. Hbk. No.* 2110.
On decaying branches. Nov.—May. 2500 ft.
East. —— —— Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe. America. Ceylon.

Var. **hyalina.*** On rotten wood. July.
Glamis. J. S.

1672. P. erumpens Grev. *C. Hbk. No.* 2111.
On dead sycamore petioles. Spring.
East. Tweed Forth —— —— Moray ——
West. —— —— —— ——
Europe. America.

1673. P. atrata Pers. *C. Hbk. No.* 2112.
On dead herbaceous stems and rotten bramble.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1674. P. fusarioides Berk. *C. Hbk. No.* 2114.
On dead nettle stems.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1675. P. elaphines B. & Br. *No.* 1325. *Pl.* xix. *fig.* 18.
Cups subglobose, pallid fawn-colour; mouth paler, white, sprinkled with saccharine granules, which are often disposed in lines, so that the cups are radiated; hymenium watery grey; sporidia fusiform, hyaline, smooth, uniseriate, ·0003–·004 inch (·0085–·01 mm.) long; asci ·0015 inch long.
On stems of *Heracleum.* March.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England.

1676. P. incarnata Cooke. *Grevillea*, i. *p.* 131.

Scattered, minute, roseate, sessile, cups soon expanded, nearly plane, externally paler; asci cylindrical; sporidia linear, obtuse, hyaline (·0004 × ·00005 inch), ·01 × ·0015 mm.

On pine leaves.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.

1677. P. rubella Pers. *B. & Br. No.* 1484.

Gregarious, minute, sessile, between soft and waxy, becoming somewhat plane, smooth, flesh-red, 1–2 lines broad; margin sublaciniate; sporidia minute, cylindrical, ·006 × ·002 mm.

On decayed wood with *P. vinosa*.

East. —— —— —— Dee Moray ——
West. —— —— —— ——

New Pitsligo. Troup. Rev. J. Fergusson.
Europe. America.

1678. P. Stevensoni* B. & Br. *No.* 1485.

Minute; cups subglobose, sugar-coloured, externally minutely granular; stem very short, thickened upwards; sporidia minute, subcymbæform, ·0005 inch (·0127 mm.) long.

This is accompanied by white creeping threads which give off erect branches, bearing obovate spores ·001 inch long. Probably a conidiiferous state.

On decorticated wood. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1874. J. S.

1679. P. litoralis Phil. *Grevillea*, iv. *p.* 121. *Pl.* 62. *fig.* 4.

Sessile, scattered or crowded, minute, black; disc dark brown, concave; margin incurved, fractured; asci subclavate; paraphyses linear; sporidia cylindrical, narrow, enucleate, straight or slightly bent, ·025 × ·002 mm.

On a bleached stick thrown up from loch. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Loch Alvie. Rev. J. Keith.

1680. P. mercurialis Fckl. *Symb. Myc. p.* 293. *Grevillea*, vi. *p.* 24.

Cups sessile, half a line broad, at first closed and globose, then open, nearly plane, externally black, squamulose; margin connivent,

whitish, fimbriate, disc grey; asci oblongo-clavate; sporidia obliquely uniseriate, sub-cylindrical, straight, hyaline, ·01 × ·002 mm.

On dead stems of *Mercurialis perennis.* Spring.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
England. Europe.

1681. P. palustris Rob. *Ann. Sc. Nat.*, 1847, *p.* 187.

Erumpent, scattered or aggregated, minute, glabrous, sessile, at first globose, greyish-brown, then open, plane or slightly convex, applanate, margin sinuose, entire, disc pallid-grey; asci clavate, minute; sporidia oblong-linear. *Desm.*

On dead culms of grass. Spring.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
Europe.

1682. P. arenevaga Desm. *Ann. Sc. Nat.*, 1852. *Grevillea*, iv. *p.* 122.

Erumpent, minute, scattered, of a soft waxy consistency, glabrous, sessile, when young globose, then plane, externally tawny, with a somewhat tumid, tawny, elevated margin, which is black when dry; disc watery, nearly white, when dry brown; asci clavate, subcylindrical, erect amongst simple paraphyses; sporidia 8, oblong-ovoid hyaline, obtuse at the ends, ·015 × ·005–·01 mm.

On *Psamma arenaria.* June.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Findhorn. Rev. J. Keith.
North Wales. Europe.

1683. P. versicolor Desm. *Ann. de Sc. Nat.*, 1853, xx. *p.* 230.

Very minute, sessile, white-hyaline, fragile, glabrous, at first globose, then turbinato-concave, slightly furfuraceous externally, margin subdenticulate; asci clavate.

The specimens sent me by the Rev. J. Keith, which I have referred to the above, did not present the peculiarity mentioned by M. Desmaziere of turning yellow when pricked with a needle, but otherwise they agreed well with the description given by that careful observer. The asci in the Scotch specimens are broadly clavate, the sporidia oblongo-fusiform, 8 in number, biseriate, ·01–·015 × ·003 mm. W. P.

On dead fronds of *Pteris aquilina.* June.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Altyre. Rev. J. Keith.
Europe.

1684. P. melataphra Lasch. *Rabh. Herb. Myco. No.* 825.

Minute, gregarious or scattered, soft, glabrous, rugulose, erumpent, sessile, nearly black, whitish at the margin; hymenium pallid-cinereous; asci subclavate; sporidia narrowly fusiform, biseriate, ·012 × ·001 mm., spuriously uniseptate; paraphyses slender.

On dead stems of *Carex*. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
Europe.

1685. P. excelsior Karst. *Myco. Fenn. p.* 199.

Gregarious, sessile, disciform, convex, when dry concave, dirty white or cinereous; hymenium pallid; asci cylindrical, elongato-fusiform, pointed at the ends, numerous nuclei, becoming spuriously multiseptate; paraphyses filiform, branched; sporidia ·05–·065 × ·004–·005 mm.

This is allied to *P. eusteœformis* B. & C., but differs in sporidia and structure of cup from that species. W. P.

On dead stems of *Arundo*. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
Europe.

1686. P. ventosa Karst. *Myco. Fenn. p.* 188.

Gregarious, subsphærico-applanate, becoming slightly convex, at first totally cinereous, then cinereous-black, epithecium ochrey-pallid or totally cinereo-nigricant, margin elevated, most frequently flexuous, obtuse; asci cylindraceo-clavate, or subcylindrical; sporidia fusiform-elongate, ·01–·02 × ·002–·0035 mm.; paraphyses filiform.

On willow. Spring.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
Europe.

1687. P. foecunda Phil. *In litt.*

Scattered, minute, at first covered by the epidermis, then erumpent, concave, when moist fuliginous without, paler on the margin; disc fuscous-black; asci broadly clavate; sporidia 8, fusiform, with three or four large nuclei; paraphyses filiform, enlarged at the apices. Cups ·5 across. Sporidia ·025–·03 × ·004–·005 mm.

The fruit in this species is large and abundant in comparison with the size of the plant. Its best known ally is *P. graminis* Desm. W. P.

On dead stems of *Eleocharis*. Aug.—Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Grantown. Rev. J. Keith.

3.—DURELLA.

1688. P. melanotheja Fr. *C. Hbk. No.* 2123.

On wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.
England. Europe. America.

1689. P. compressa A. & S. *C. Hbk. No.* 2124.

On hard wood. Perennial.

East. —— —— —— —— Moray ——
West. —— —— Argyle ——

Appin. Carmichael. Sanquhar. Rev. J. Keith.
Europe. America.

1690. P. flexella Fr. *C. Hbk. No.* 2125.

On dead wood, especially pine. Perennial.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.
Europe. America.

1691. P. connivens Fr. *Sys. Myc.* ii. 151.

Minute, gregarious, innate, sessile, black, concave, margin thin, when dry compressed; disc rufescent, cinereous, or black; asci clavate; sporidia oblongo-fusiform, 3-septate; paraphyses filiform, branched.
Sporidia ·016–·026 × ·0045–·0055 mm. Nyl.

On dead wood. Feb.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Dunphail. Rev. J. Keith.
Europe.

CCCXXIV. BELONIDIUM De Not.

Cups sessile or shortly stipitate, cyathoid, or funnel-shaped, mouth closing when dry, exterior of cup formed of elongated cells; substance rather waxy; sporidia mostly septate. De Not.

1692. B. pullum Phil. & Keith. *Grevillea*, vi. *p.* 75.

Scattered. Cups 1 mm. broad, sessile, at length flattened, watery-cinereous, externally brown; asci cylindraceo-clavate; sporidia fusiform, nucleate, then 3-septate, ·025-·03 × ·003-·005 mm.; paraphyses linear, ovate at the apex, splitting.

On *Poa* and *Typha*.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.

CCCXXV. HELOTIUM Fr.

1693. H. fibuliforme Fr. *C. Hbk. No.* 2126.

On dead wood.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
England. Europe.

1694. H. agaricinum Berk. *C. Hbk. No.* 2127.

On decayed wood.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.

1695. H. sclerotioides Berk. *C. Hbk. No.* 2128.

On decayed wood.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.

1696. H. aciculare Fr. *C. Hbk. No.* 2129.

On roots and in hollow stumps. Aug.—Dec.

East. —— —— —— —— Moray ——
West. —— —— Argyle ——

England. Europe. America.

1697. H. subtile * Fr. *C. Hbk. No.* 2130.

On pine leaves. Oct.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——

Appin. Carmichael. Glamis. J. S.
England. Europe.

1698. H. aeruginosum * Fr. *C. Hbk. No.* 2131.

On dead branches, chiefly oak. Aug.—Nov.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——

England. Europe. America. Teneriffe.

1699. H. virgultorum * Fr. *C. Hbk. No.* 2133.

On fir cones, beech mast, hazel nuts, &c. Aug.—Nov.

East. —— Forth Tay —— Moray ——
West. —— Clyde —— ——

England. Europe. America.

Var. **flavescens.** On dead willow.

Jedburgh. A. Jerdon.

1700. H. lutescens * Fr. *C. Hbk. No.* 2134.

On fir cones, dead branches, &c. Sept.—Nov.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

1701. H. conigenum Fr. *C. Hbk. No.* 2135.

On cones of Scotch fir.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Foxhall, Edinburgh. Greville. Fl. Ed.
England. Europe.

1702. H. acuum Fr. *C. Hbk. No.* 2137.

On leaves of spruce fir.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Mossburnford. A. Jerdon.
England. Europe. America.

Retained as *Helotium* provisionally. Probably a *Peziza.*

1703. H. tuba Fr. *C. Hbk. No.* 2140.
On dead leaves. Nov.
East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe.
Var. **ochracea** *B. & Br. No.* 1485. Menmuir. Rev. M. L. Anderson.

1704. H. buccina Fr. *C. Hbk. No.* 2141.
On pine branches and stumps. Nov.
East. —— —— —— —— Moray ——
West. —— —— Argyle ——
Appin. Carmichael. Greeshop. Rev. J. Keith.
Europe. America.

1705. H. calyculus * Fr. *C. Hbk. No.* 2142.
On dead wood. Nov.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

1706. H. infundibulum * Fr. *C. Hbk. No.* 2143.
On dead wood. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Den of Dun. J. S.
England. Europe.

1707. H. citrinum * Fr. *C. Hbk. No.* 2145.
On old stumps, &c. Aug.—Nov. 1000 ft.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

1708. H. pallescens * Fr. *C. Hbk. No.* 2146.
On old stumps, &c. Sept.—Nov.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1709. H. lenticulare * Fr. *C. Hbk. No.* 2147.
On stumps, aspen, &c. Nov.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe.

1710. H. ochraceum Fr. *C. Hbk. No.* 2148.

On stumps and sticks. Autumn.

East. —— Forth —— —— Moray ——
West. —— —— —— ——

Edinburgh. Greville. Sanquhar. Rev. J. Keith.

1711. H. claro-flavum * Berk. *C. Hbk. No.* 2150.

On dead wood. March—Autumn.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. America.

1712. H. salicellum Fr. *C. Hbk. No.* 2151.

On willow.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

1713. H. pruinosum Jerd. *C. Hbk. No.* 2154.

On *Hypoxylon fuscum* and *Diatrype stigma.* Summer.

East. Tweed —— Tay —— Moray ——
West. —— —— Argyle ——

1714. H. herbarum * Fr. *C. Hbk. No.* 2156.

On dead nettle stems. Autumn.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1715. H. epiphyllum * Fr. *C. Hbk. No.* 2157.

On dead beech leaf. Oct.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe. America.

1716. H. fagineum * Fr. *C. Hbk. No.* 2158.

On dead twigs, &c. Jan.—Oct.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1717. H. punctatum Grev. *C. Hbk. No.* 2159.

On dead oak leaves.

East. Tweed Forth —— —— —— ——
West. —— —— —— ——

Edinburgh. Greville. Jedburgh. A. Jerdon.

1718. H. marchantiae Fr. *C. Hbk. No.* 2160.

On fading *Marchantia conica.*

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England.

1719. H. melleum B. & Br. *No.* 1487.

Pallid honey-colour; stem short, cylindrical; cups plane, flexuose, margin elevated, inflexed; asci elongated, lanceolate; sporidia biseriate, fusiform, curved on one side, multinucleate, ·0012 inch long. About a line broad, stem half as much high. Allied to *H. luteolum.*

On rotten wood.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forglen. Rev. J. Fergusson.

1720. H. sublateritium * B. & Br. *No.* 1488.

Pallid brick-red; stem short, cylindrical, delicately white-villose, becoming smooth; cups plane, veined beneath, margin elevated; asci linear; sporidia uniseriate, shortly fusiform, binucleate ·001 inch long, one-fifth as much wide in the centre.

On stems of herbaceous plants. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Den, 1874. J. S.

1721. H. laburni B. & Br. *No.* 1624.

Shortly stipitate; cups externally villose, furfuraceous, pallid; margin inflexed; disc ochraceous, bright-coloured; sporidia fusiform, quadrinucleate, ·0009 inch.

On branches of *Cytisus laburnum.*

East. —— —— Tay —— —— ——
West. —— —— —— ——

Menmuir. Rev. M. L. Anderson.

1722. H. scoparium Cooke. *Grevillea*, iv. *p.* 111.

Scattered or subgregarious, pallid, sessile, disc convex, rather paler, whole plant becoming greyish in drying, cups 1 mm. broad;

asci clavate, ·1 × ·02 mm.; sporidia cylindrical, obtuse, straight or curved, binucleate, at length with the endochrome divided, ·02 – ·025 × ·005 mm.; paraphyses simple, filiform, slightly granular.

On dead twigs of broom. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dupplin, 1875. Dr. M. C. Cooke.

CCCXXVI. PSILOPEZIA Berk.

1723. P. myrothecioides B. & Br. *No.* 1489. *Pl.* 2, *f.* 5.

Suborbicular; margin laciniate, tomentose, pallid yellow; disc greenish-black; asci linear; sporidia elliptic, margin pellucid, ·0009 inch long.

Some of the asci contain a very delicate spiral thread or line, a structure which Fuckel has observed in some other species.

On *Prunus padus.* Spring—Autumn. 1700 ft.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Craighall. Fern. Strachan. Troup, &c. Rev. J. Fergusson.

Ireland (Killarney. Very abundant. J. F.)

CCCXXVII. PATELLARIA Fr.

1724. P. atrata Fr. *C. Hbk. No.* 2163.

On decayed stumps.

East. —— —— Tay —— Moray ——
West. —— —— Argyle ——

England. Europe. America.

1725. P. rhabarbarina* Berk. *C. Hbk. No.* 2164.

On dead stems of bramble. April.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.

England. Europe. America.

1726. P. livida B. & Br. *C. Hbk. No.* 2167.

On fir. Aug.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Dunoon. C. B. Plowright.
England.

1727. P. discolor* Mont. *C. Hbk. No.* 2169.

On sticks. June—Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

1728. P. lignyota Fr. *C. Hbk. No.* 2177.

On dead birch. Feb.—Aug.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Dunoon. C. B. Plowright.
England.

1729. P. lecideola* Fr. *C. Hbk. No.* 2179.

On decorticated oak. Jan.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis. J. S.
England. Europe.

1730. P. Fergussoni B. & Br. *No.* 1490. *Pl.* ii. *fig.* 6.

Stem short, thickened upwards; cups plane, externally fuscous, granulose; hymenium plane or pulvinate, yellow; asci elongated; sporidia filiform, ·009 inch long; paraphyses with a globose head.

On *Prunus padus*.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forglen. Rev. J. Fergusson.

CCCXXVIII. SPHINCTRINA Fr.

CCCXXIX. LAQUEARIA Fr.

CCCXXX. TYMPANIS Tode.

1731. T. alnea Pers. *C. Hbk. No.* 2184.
On alder.
East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——
Europe.

1732. T. fraxini Schm. *C. Hbk. No.* 2185.
On ash branches. Winter—Spring.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe.

1733. T. conspersa* Fr. *C. Hbk. No.* 2186.
On raspberry, mountain ash, &c.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

CCCXXXI. CENANGIUM Fr.

1734. C. cerasi* Fr. *C. Hbk. No.* 2189.
On cherry bark. April.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1735. C. prunastri Fr. *C. Hbk. No.* 2190.
On branches of *Prunus spinosa.* Autumn—Winter.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

1736. C. aucupariae Fr. *C. Hbk. No.* 2191.
On mountain ash.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe.

1737. C. pulveraceum * Fr. *C. Hbk. No.* 2192.

On dead wood. Nov.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——

Appin. Carmichael. Glamis. J. S.
England. Europe. America. Ceylon.

1738. C. fuliginosum Fr. *C. Hbk. No.* 2193.

On *Salix helix.*

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe.

1739. C. ferruginosum Fr. *C. Hbk. No.* 2194.

On Scotch fir branches.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——

Europe. America.

1740. C. rubi * Fr. *C. Hbk. No.* 2195.

On raspberry stems. June—July.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

Europe.

1741. C. laricinum Fckl. *Grevillea,* ii. *p.* 187.

Pycnidia. *Cenangium bullatum*, A. & S. *Consp. p.* 344. *C. pinastri*, b. *monstrosum, Fr. Sys. Myc.* ii. *p.* 184.
Cupula round, closed, then perforated, black, rugulose, stylospores long, filliform, slender, curved.
Ascophore. Fckl. *Symb. Myc. p.* 270.
Scattered or cæspitose, as in *C. pinastri*, but totally black; asci filled with spermatia-like corpuscles.

On larch.

East. —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.
England. Europe.

CCCXXXII. ASCOBOLUS Tode.

1742. A. jungermanniae B. & Br. *C. Hbk. No.* 2199.

On *Jungermanniæ.*

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe.

1743. A. furfuraceus * Pers. *C. Hbk. No.* 2200.

On cow dung. May—Dec. 2500 ft.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America. Arctic.

1744. A. vinosus Berk. *C. Hbk. No.* 2201.

On rabbit's dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sanquhar. Rev. J. Keith.
England. Europe.

1745. A. aerugineus Fr. *C. Hbk. No.* 2202.

On horse and cow dung. Summer. 1500 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Fern. Glenshee. Rev. J. Fergusson.
England. Europe.

1746. A. glaber Pers. *C. Hbk. No.* 2203.

On rabbit's dung.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1747. A. immersus Pers. *C. Hbk. No.* 2204.

On cow dung. Aug.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1748. A. neglectus Boud. *Mem. sur les Asco.* p. 41, *t.* 9, *fig.* 20.

Very minute, often scarcely visible to the naked eye, white or cinereous, smooth; disc convex, brown in age, thickly black-dotted with the mature thecæ; paraphyses hyaline, scarcely incrassated at their tips.

On cow dung. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
Europe.

1749. A. Cookei Boud. *Mon. Asc. p.* 48, *t.* 9, *fig.* 24.

Very much crowded, rarely scattered, $\frac{1}{70}$ to $\frac{1}{5}$ mm. broad, externally brown; disc pallid; asci containing 64 oblong, minute, hyaline sporidia; paraphyses very few, hyaline, septate, scarcely incrassated at the tips.

On dog's dung. Winter.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Rannoch. Dr. B. White. Forres. Rev. J. Keith.

1750. A. granuliformis Crouan. *C. Hbk. No.* 2208.

On cow dung. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
England. Europe.

1751. A. argenteus Curr. *C. Hbk. No.* 2210.

On cow dung. Aug.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1752. A. carneus Pers. *C. Hbk. No.* 2213.

On cow dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.
England. Europe.

1753. A. ciliatus Schum. *C. Hbk. No.* 2215.

On cow dung. 2000 ft.

East. —— —— Tay Dee Moray ——
West. —— —— Argyle ——

England. Europe. America.

1754. A. pilosus Fr. *Boud. Mem. p.* 64.

Minute, $\frac{1}{10}$ mm. broad, sessile, yellow, testaceous-yellow or tawny orange, externally pilose with long hairs, disc papillate, margin naked, hairs simple, incrassated at the base; asci clavate; sporidia hyaline, oblong ovate, ·02 × ·01 mm.; paraphyses slender, septate, simple or branched, granular. *Grevillea*, iv. p. 112.

On grouse dung.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.
Europe. America.

1755. A. crenulatus Karst. *Myc. Fenn.* i. *p.* 77.

Gregarious, sessile, at first sphæroid, then flattened, nearly plane, greenish-yellow, furfuraceous, cups about 1–1½ mm. broad; margin crenulate (1–5 mm. broad); asci clavate; sporidia elliptical, striate, violet, becoming brownish, ·012–·016 × ·006–·008 mm.; paraphyses slender. *Grevillea*, iv. p. 112.

Disc of the Rannoch specimens vinous when old, retaining the greenish colour at the base of the cups.

On grouse dung.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.
Europe.

CCCXXXIII. BULGARIA Fr.

1756. B. inquinans * Fr. *C. Hbk. No.* 2217.

On oak. Aug.—Nov.

East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— Ross
England. Europe. America.

1757. B. sarcoides * Fr. *C. Hbk. No.* 2218.

On dead branches, stumps, &c. July—Dec. 2200 ft.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— Ross
England. Europe. America. Australia.

CCCXXXIV. AGYRIUM Fr.

1758. A. rufum Pers. *C. Hbk. No.* 2219.
On dry fir wood. Aug.
East. —— —— —— —— Moray ——
West. —— —— Argyle ——
Appin. Carmichael. Aviemore. Rev. J. Keith.
England. Europe. America.

CCCXXXV. STICTIS Pers.

1759. S. radiata* Pers. *C. Hbk. No.* 2220.
On sticks and fir cones.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1760. S. pallida Pers. *C. Hbk. No.* 2221.
On wood.
East. —— —— —— Dee —— ——
West. —— —— Argyle ——
Appin. Carmichael. Aberdeen. Prof. Dickie.
Europe. America.

1761. C. miscrostoma Carm. *C. Hbk. No.* 2222.
On wood.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.

1762. S. chrysophaea Fr. *C. Hbk. No.* 2226.
On decorticated oak branches.
East. —— —— —— Dee —— ——
West. —— —— —— ——
Aboyne. Rev. M. J. Berkeley.
England. Europe.

1763. S. lecanora Schum. *C. Hbk. No.* 2227.
On dead willow twigs.
East. Tweed —— —— —— Moray ——
West. —— —— —— ——
Europe.

1764. S. parallela Fr. *C. Hbk. No.* 2228.
On dead fir. Aug.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
Europe. America.

1765. S. longa Fr. *C. Hbk. No.* 2229.
On wood.
Hook. Herb. Scotland. No locality recorded.
Europe.

1766. S. versicolor * Fr. *C. Hbk. No.* 2230.
On sticks. Jan.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe. America.

1767. S. phacidioides Fr. *C. Hbk. No.* 2231.
On leaves of *Arbutus uva-ursi.* Aug.
East. —— —— —— —— Moray Sutherland
West. —— —— —— ——
Sutherland. C. Hbk. Grantown. Rev. J. Keith.
Europe.

1768. S. seriata Lib. *Grevillea,* iv. *p.* 123. *Phil. El. Brit. No.* 100.
Cups innate, punctiform, orbicular, plane or but slightly concave, disposed in approximate series, rubro-fuscous; asci linear, including 6-8 globose, minute, hyaline sporidia. *Fckl.*
On *Carex ampullacea.* June.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Manachie. Rev. J. Keith.
Europe.

CCCXXXVI. BLOXAMIA B. & Br.

CCCXXXVII. ASCOMYCES M. & D.

1769. A. trientalis Berk. *C. Hbk. No.* 2234.
On leaves of *Trientalis.*
East. —— —— Tay Dee —— ——
West. —— —— ——
England.

1770. A. pruni Fckl. *Fungi Nass. p.* 29. *B. & Br. No.* 1629. *Grevillea*, v. *p.* 62.

Sporidia ovate or irregular; asci subclavate, obtuse, distorting the fruit on which it occurs.

On *Prunus padus*. July.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Strathglass. Rev. J. Keith. Glen Tilt. Dr. B. White.
England. Europe.

1771. A. Tosquinetii West. *Grevillea*, vi. *p.* 25.

Appears in two forms, either as a white bloom in patches upon the leaves, or in a more diffused manner, producing great distortion of the leaf, almost after the manner of *Exobasidium*.

On alder leaves. Sept.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
England. Europe.

Order XXIX.—PHACIDIACEI.

CCCXXXVIII. PHACIDIUM Fr.

1772. P. pini Schum. *C. Hbk. No.* 2262.

On bark of *Pinus sylvestris*.

East. Tweed —— —— —— Moray ——
West. —— —— Argyle ——

England. Europe. America.

1773. P. carbonaceum Fr. *C. Hbk. No.* 2263.

On willow.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

1774. P. vaccinii Fr. *C. Hbk. No.* 2264.

On dead leaves of *Vaccinium*.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1775. P. coronatum* Fr. *C. Hbk. No.* 2265.
On leaves of beech, birch, &c. July—Sept.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1776. P. dentatum* Fr. *C. Hbk. No.* 2266.
On dead leaves of oak. Sept.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1777. P. abietinum Schum. *C. Hbk. No.* 2268.
On leaves of Scotch fir.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
Europe. America.

1778. P. repandum Fr. *C. Hbk. No.* 2269.
On *Asperula*, *Sherardia*, and *Galeopsis*.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1779. P. trifolii Boud. *C. Hbk. No.* 2270.
On living leaves of clover.
East. Tweed —— Tay Dee Moray ——
West. —— —— Argyle ——
England. Europe. America.

1780. P. ranunculi Desm. *C. Hbk. No.* 2271.
On leaves of *Ranunculus repens*. Autumn.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe.

1781. P. ilicis* Fr. *C. Hbk. No.* 2272.
On dead leaves of holly. Jan.—Dec.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross
England. Europe.

1782. P. leptideum* Fr. *Sys. Myc.* ii. *p.* 576. *B. & Br. No.* 1830.

Subinnate, depresso-plane, black, splitting into many acute laciniæ, disc straw-coloured; asci rather large, subclavate; sporidia 2-annulate.

The pale spots are here and there encircled with a black line.

On *Vaccinium myrtillus*. Aug. 1100 ft.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Strath-Tay, Creag Maoiseach. J. S.

Europe.

1783. P. calthae* Phil. *In litt.*

Hypophyllous, innate, congregated on brown spots, erumpent, disciform, convex, cinereous; asci broadly clavate; sporidia oblongo-fusiform, or subclavate, enucleate; paraphyses filiform, occasionally forked at the apices. Sporidia ·015-·023 × ·005-·007 mm.

On decaying leaves of *Caltha palustris*. Autumn.

East. —— —— Tay —— —— ——

West. —— —— —— ——

Loch of Forfar, 1878. J. S.

CCCXXXIX. HETEROSPHAERIA Grev.

1784. H. patella* Grev. *C. Hbk. No.* 2275.

On dead stems of *Angelica*. Jan.—Dec. 2200 ft.

East. Tweed Forth Tay Dee Moray ——

West. —— Clyde Argyle ——

England. Europe.

CCCXL. RHYTISMA Fr.

1785. R. maximum Fr. *C. Hbk. No.* 2276.

On branches of willow.

East. —— Forth Tay —— —— ——

West. —— —— —— ——

England. Europe.

1786. R. salicinum* Fr. *C. Hbk. No.* 2278.

On willow leaves. Oct. 2300 ft.

East. —— Forth Tay —— —— ——

West. —— —— —— Ross

England. Europe. America. Siberia.

1787. R. acerinum* Fr. *C. Hbk. No.* 2279.

On leaves of sycamore. Summer—Autumn.

East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America.

1788. R. punctatum Fr. *C. Hbk. No.* 2280.

On sycamore. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Noran. Rev. M. L. Anderson.
England. Europe. America.

1789. R. urticae* Fr. *C. Hbk. No.* 2281.

On dead stems of nettle. Winter—Spring.

East. Tweed —— Tay —— —— ——
West. —— Clyde —— Ross
England. Europe.

1790. R. empetri B. White. *B. & Br. No.* 1630.

Completely surrounding the stem, jet-black, shining, wrinkled longitudinally; asci straight.

On *Empetrum nigrum.* 2000 ft.

East. —— —— Tay Dee Moray ——
West. —— —— —— ——
Rannoch. Braemar. Inverness. Dr. B. White.
North Wales.

CCCXLI. TRIBLIDIUM Reb.

1791. T. caliciiforme Reb. *C. Hbk. No.* 2282.

On branches of lime.

East. —— —— —— —— —— ——
West. —— Clyde —— ——
Hamilton. Klotzsch.
England. Europe. America.

CCCXLII. HYSTERIUM Tode.

1792. H. pulicare Pers. *C. Hbk. No.* 2283.
On dead wood.
East. —— Forth —— —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

1793. H. angustatum A. & S. *C. Hbk. No.* 2284.
On dead wood.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Slateford. Greville. Fl. Ed.
England. Europe.

1794. H. elongatum * Wahl. *C. Hbk. No.* 2288.
On dead stems of rose. Sept.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1795. H. fraxini * Pers. *C. Hbk. No.* 2289.
On dead branches of ash. Winter—Spring.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1796. H. curvatum * Fr. *C. Hbk. No.* 2290.
On bramble, holly, &c. Autumn.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1797. H. Carmichaelianum Berk. *C. Hbk. No.* 2291.
On smooth oak bark.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.

1798. H. lineare Fr. *C. Hbk. No.* 2292.
On broom stick.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
Europe. America.

1799. H. ilicinum * De Not. *C. Hbk. No.* 2294.
On petioles of oak leaves.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1800. H. virgultorum * D. C. *C. Hbk. No.* 2295.
On dead bramble. Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

1801. H. commune * Fr. *C. Hbk. No.* 2296.
On dead herbaceous stems. May.
East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe. America.

1802. H. hederae De Not. *C. Hbk. No.* 2297.
On ivy.
East. —— Forth Tay Dee —— ——
West. —— —— —— ——
England. Europe.

1803. H. conigenum * Fr. *C. Hbk. No.* 2298.
On cones of Scotch fir. 1300 ft.
East. Tweed —— Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe.

1804. H. xylomoides * Chev. *C. Hbk. No.* 2299.
On hawthorn leaves. May.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1805. H. melaleucum * Fr. *C. Hbk. No.* 2300.
On dead leaves of *Vaccinium vitis-idœa.* Aug.
East. —— Forth Tay —— Moray ——
West. —— —— —— Ross
Europe.

1806. H. maculare * Fr. *C. Hbk. No.* 2301.

On dead leaves of oak and *Vaccinium myrtillus*.
Summer—Autumn.

East. —— —— Tay —— —— ——
West. —— Clyde Argyle ——
England. Europe. America. Ceylon.

1807. H. pinastri * Schrad. *C. Hbk. No.* 2302.

On leaves of Scotch fir. Jan.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

1808. H. juniperinum * De Not. *C. Hbk. No.* 2303.

On dead leaves of juniper. May. 1800 ft.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1809. H. arundinaceum Schrad. *C. Hbk. No.* 2304.

On stems of *Arundo*.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

Var. **gramineum** M. & N. *B. & Br. No.* 1494. On grass. Rev. J. Keith.

CCCXLIII. LABRELLA Fr.

1810. L. ptarmicae Desm. *Fr. El.* ii. *p.* 149.

Spot none; perithecia rounded-oblong, punctiform, black, shining; sporidia ovoid.
Like a minute *Dothidea*.

On leaves of *Achillea ptarmica*.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Rannoch. Dr. B. White.
Europe.

CCCXLIV. SPOROMEGA Corda.

1811. S. cladophila Lev. *C. Hbk. No.* 2306.
On stems of *Vaccinium myrtillus*.
East. —— —— —— —— Moray ——
West. —— —— Argyle ——
Europe.

CCCXLV. COLPOMA Wallr.

1812. C. quercinum * Wallr. *C. Hbk. No.* 2307.
On oak branches. April—Dec. 1000 ft.
East. —— Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

CCCXLVI. AILOGRAPHUM Lib.

CCCXLVII. ACTIDIUM Fr.

CCCXLVIII. LOPHIUM Fr.

1813. L. elatum Grev. *C. Hbk. No.* 2311.
On fir.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.

1814. L. mytilinum Fr. *C. Hbk. No.* 2312.
On fir, bark, and decorticated wood. Jan.—Dec. 1200 ft.
East. —— —— Tay Dee —— ——
West. —— —— Argyle ——
Europe. America.

CCCXLIX. STEGIA Fr.

1815. S. ilicis * Fr. *C. Hbk. No.* 2313.
On dead leaves of holly. Jan.—Dec.
East. Tweed Forth Tay —— Moray ——
West. Solway Clyde Argyle Ross
England. Europe.

CCCL. EUSTEGIA Fr.

1816. E. arundinacea * Fr. *El.* ii. *p.* 112.

Erumpent, operculum depressed by collapsing, umbonate. The cup is surrounded at first with a thin membranaceous pallid margin formed of the epidermis, at length with a more proper black one; disc rufescent, at length nigrescent, plane, concave by collapsing; deciduous, like an operculum, the cup remaining. Internal structure gelatinous. Fr.

Asci linear-clavate, stipitate, 7 mk. long, 6 mk. broad; sporidia biseriate, in upper part of asci, fusiform, straight, 1–2 guttulate, simple, hyaline, 8 mk. long, 2½ mk. broad; paraphyses copious, linear, attenuated at both ends, the length of the asci. Fckl.

On dead *Arundo* stems.—Autumn.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Loch of Balgavies, 1874. J. S. Grantown. Rev. J. Keith.
Europe.

CCCLI. TROCHILA Fr.

1817. T. lauro-cerasi * Fr. *C. Hbk. No.* 2314.

On dead leaves of laurel. Jan.—Dec.

East. Tweed —— Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe.

1818. T. buxi Capron. *C. Hbk. No.* 2315.

On dead leaves of box.

East. —— —— Tay —— Moray ——
West. —— —— —— ——
England.

1819. T. craterium * Fr. *C. Hbk. No.* 2316.

On dead leaves of ivy. Jan.—Dec.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

CCCLII. DICHAENA Fr.

1820. D. strobilina* Fr. *C. Hbk. No.* 2805.
On spruce fir cones. Jan.—Dec.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	Argyle	Ross		

England. Europe.

1821. D. rugosa* Fr. *Sys. Myc.* ii. *El. p.* 141.
Stroma crustaceous, innate, fuscous-black; perithecia (through living bark) erumpent, elliptic, at length confluent in shapeless patches.
On oak. Jan.—Dec.

East.	——	Forth	Tay	Dee	——	——
West.	——	Clyde	——	——		

England. Europe.

Order XXX.—PERISPORIACEI.

CCCLIII. PERISPORIUM Fr.

1822. P. vulgare Corda. *C. Hbk. No.* 1907.
On a piece of straw in old dog's dung. Aug.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Rothiemurchus. Rev. J. Keith.
England. Europe.

CCCLIV. ORBICULA Cooke.

1823. O. perichaenoides Cke. *In litt.*
Scattered; perithecia orbicular, flattened, at length dark brown, membranaceous, splitting irregularly and exposing the yellowish-white contents, where it resembles a small *Perichæna* (¼ mm. diameter); asci cylindrical, very thin, and soon dissolved; sporidia globose, hyaline (about ·01 mm. diameter); paraphyses slender, filiform, at first numerous. Mycelium delicate, white.
On old fir beam.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.

CCCLV. LASIOBOTRYS Kunze.

1824. L. lonicerae * Kunze. *C. Hbk. No.* 1909.

On leaves of honeysuckle. Autumn.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. Siberia.

CCCLVI. SPHAEROTHECA Lev.

1825. S. pannosa Lev. *C. Hbk. No.* 1910.

On leaves, &c., of roses. 1200 ft.

East.	——	——	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe. India.

1826. S. castagnei Lev. *C. Hbk. No.* 1911.

On leaves of meadow-sweet and hop. Autumn.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. Siberia.

CCCLVII. PHYLLACTINIA Lev.

1827. P. guttata Lev. *C. Hbk. No.* 1912.

On leaves of hazel, alder, &c. Autumn. 2000 ft.

East.	——	Forth	Tay	——	Moray	——
West.	——	Clyde	——	——		

England. Europe. America.

CCCLVIII. UNCINULA Lev.

1828. U. Wallrothii Lev. *C. Hbk. No.* 1915.

On leaves of sloe. Autumn.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

1829. U. adunca Lev. *C. Hbk. No.* 1913.

On willow leaves. Autumn.

East. —— Forth —— —— Moray ——
West. —— —— —— ——

England. Europe. America. Siberia.

1830. U. bicornis* Lev. *C. Hbk. No.* 1914.

On leaves of sycamore. Autumn.

East. —— Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe.

CCCLIX. PODOSPHAERIA Kunze.

1831. P. Kunzei Lev. *C. Hbk. No.* 1916.

On leaves of *Prunus padus* and *Sorbus*. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Grantown. Rev. J. Keith.
England. Europe. America.

Var. **myrtillina** Kunze. On *Vaccinium myrtillus*. Rev. J. Keith.

1832. P. clandestina Lev. *C. Hbk. No.* 1917.

On hawthorn. Autumn.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

CCCLX. MICROSPHAERIA Lev.

1833. M. penicillata* Lev. *C. Hbk. No.* 1919.

On alder. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Kenmore. J. S. Dunkeld. Dr. B. White.
England. Europe. America.

1834. M. berberidis * Lev. *C. Hbk. No.* 1921.
On leaves of *Berberis*. Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle ——
England. Europe.

1835. M. grossulariae * Lev. *C. Hbk. No.* 1922.
On leaves of gooseberry. Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America.

CCCLXI. ERYSIPHE Hedw.

1836. E. Linkii Lev. *C. Hbk. No.* 1924.
On leaves of mugwort. Autumn.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. Siberia.

1837. E. lampocarpa Lev. *C. Hbk. No.* 1925.
On *Plantago maritima*.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. Siberia.

1838. E. graminis * D. C. *C. Hbk. No.* 1926.
On leaves of grass. Summer—Autumn.
East. Tweed Forth Tay Dee —— ——
West. —— —— —— Ross
England. Europe. America.

1839. E. Martii * Link. *C. Hbk. No.* 1927.
On leaves of *Heracleum*, pea, &c. Summer—Autumn.
East. —— Forth Tay Dee Moray ——
West. —— —— —— Ross
England. Europe. America. Siberia. India.

1840. E. Montagnei Lev. *C. Hbk. No.* 1928.
On leaves of burdock. Autumn.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1841. E. horridula Lev. *C. Hbk. No.* 1931.
On leaves of *Lycopsis arvensis*, and *Symphytum*. Summer.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America. Siberia.

1842. E. communis * Schl. *C. Hbk. No.* 1930.
On leaves of *Ranunculacæ* and *Leguminosæ*. Autumn.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America. Siberia.

CCCLXII. CHAETOMIUM Kunze.

1843. C. elatum * Kunze. *C. Hbk. No.* 1932.
On dead stems of thistle, &c. Autumn—Spring.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America.

CCCLXIII. ASCOTRICHA Berk.

1844. A. chartarum Berk. *C. Hbk. No.* 1936.
On paper.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
England.

CCCLXIV. EUROTIUM Link.

1845. E. herbariorum * Link. *C. Hbk. No.* 1937.
On decaying vegetables, &c.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. India.

1846. E. fulvescens Cooke. *In. litt.*
Peridia sessile, globose, scattered, or 3 to 6 together, tawny-ochre, seated on a floccose, white mycelium ; asci globose, soon dissolved ;

sporidia globose, ·006-·007 mm. diameter, pale brown, sometimes slightly oval. Allied also to *Cephalotheca* Fckl.

This was formerly included with *Myxomycetes* in error as *Badhamia fulvescens* Cke. *Grevillea*, iv. p. 69.

On old sacking. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dupplin Castle. Dr. M. C. Cooke.

CCCLXV. CAPNODIUM Mont.

1847. C. Footii * Berk. & Desm. *C. Hbk. No.* 2807.

On leaves of laurel and ivy. Autumn.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

CCCLXVI. ASTERINA Lib.

1848. A. veronicae Lib. *Capnodium sphæricum, C. Hbk. No.* 2808.

On leaves of *Veronica officinalis.* 1000 ft.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

CCCLXVII. MYCROTHYRIUM Desm.

1849. M. microscopicum Desm. *C. Hbk. No.* 2790.

On box leaves.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

England. Europe. America.

Order XXXI.—SPHAERIACEI.

A.—NECTRIAEI.

CCCLXVIII. TORRUBIA Lev.

1850. T. entomorrhiza Fr. *C. Hbk. No.* 2317.
On a wasp in moss.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sluie. Rev. J. Keith.
England. Europe. America.

1851. T. gracilis B. *C. Hbk. No.* 2318.
On the ground in moist mossy places.
Shetland. W. C. Trevelyan. Scot. Crypt. Fl.

1852. T. militaris Fr. *C. Hbk. No.* 2319.
On pupæ of moths among moss. Oct.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1853. T. ophioglossoides * Tul. *C. Hbk. No.* 2321.
On *Elaphomyces variegatus.* Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1854. T. capitata * Fr. *C. Hbk. No.* 2322.
On *Elaphomyces granulatus.* Autumn.
East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe. America.

CCCLXIX. CLAVICEPS Tul.

1855. C. purpurea Tul. *C. Hbk. No.* 2324.
On grains of corn and grass. Summer—Autumn.
2000 ft.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

CCCLXX. EPICHLOE Fr.

1856. E. typhina * Berk. *C. Hbk. No.* 2326.
On living grass. Summer—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde —— ——
England. Europe. America.

CCCLXXI. HYPOCREA Fr.

1857. H. gelatinosa Fr. *C. Hbk. No.* 2327.
On fir. Autumn.
East. Tweed —— —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

1858. H. rufa * Fr. *C. Hbk. No.* 2328.
On oak and birch branches. Aug.—Dec.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America. Australia. Ceylon.

1859. H. parmelioides Mont. *B. & Br. sub.* 1831. *H. riccioidea* Berk. *C. Hbk. No.* 2329. *Sphæria riccioidea* Bolt.
On dead willow. April.
East. —— —— —— —— —— ——
West. Solway —— —— ——
New Galloway, 1878. J. M'Andrew.
Found previously in Britain only once, in February 1790.
England. Europe.

1860. H. citrina Fr. *C. Hbk. No.* 2331.
On leaves, wood, &c. Autumn—Winter.
East. —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe. America. Ceylon.

1861. H. delicatula Tul. *C. Hbk. No.* 2332.
On fir. Autumn.
East. —— —— —— Dee —— ——
West. —— —— —— ——
New Pitsligo. Rev. J. Fergusson.
England. Europe.

1862. H. alutacea Fr. *C. Hbk. No.* 2333.
On wood.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Den of Fullerton. Rev. J. Fergusson.
England. Europe. America.

1863. H. farinosa * B. & Br. *C. Hbk. No.* 2334.
On dead *Polyporus annosus.* Aug.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S.
England.

CCCLXXII. HYPOMYCES Tul.

1864. H. ochraceus Tul. *C. Hbk. No.* 2336.
On decaying fungi.

East.	——	Forth	Tay	Dee	——	——
West.	——	——	——	——		

England. Europe. America.

1865. H. aurantius Tul. *C. Hbk. No.* 2337.
On decaying *Polyporus versicolor.*

East.	——	Forth	Tay	——	Moray	——
West.	——	Clyde	Argyle	——		

England. Europe. America.

1866. H. rosellus * Tul. *C. Hbk. No.* 2338.
On *Thelephora*, and decaying pine log. Dec.

East.	——	Forth	Tay	——	——	——
West.	——	——	Argyle	——		

England. Europe. America.

1867. H. lateritius Tul. *C. Hbk. No.* 2341.
On *Lactarius deliciosus.*

East.	Tweed	——	——	——	——	——
West.	——	——	——	——		

Jedburgh. A. Jerdon.
England. Europe. America.

CCCLXXIII. OOMYCES B. & Br.

CCCLXXIV. ACROSPERMUM Tode.

1868. **A. compressum** Tode. *C. Hbk. No.* 1257.
On dead stems of nettle.
East. Tweed Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

CCCLXXV. NECTRIA Fr.

1869. **N. ochracea** Fr. *C. Hbk. No.* 2345.
On rotten wood, &c. Autumn—Winter.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe.

1870. **N. cinnabarina*** Fr. *C. Hbk. No.* 2346.
On dead wood. Autumn—Winter. 1200 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross
England. Europe. America. Siberia. Ceylon.

1871. **N. coccinea*** Fr. *C. Hbk. No.* 2348.
On dead twigs. Spring—Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— Clyde —— ——
England. Europe. America. Ceylon.

1872. **N. cucurbitula** Fr. *C. Hbk. No.* 2349.
On dead branches. April.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1873. **N. sinopica** Fr. *C. Hbk. No.* 2350.
On ivy.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe.

1874. N. aquifolia Berk. *C. Hbk. No.* 2351.

On holly twigs.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England. Europe.

1875. N. Albertini* B. & Br. *C. Hbk. No.* 2355.

On dead fir. Autumn.

East. —— Forth —— —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

1876. N. Rousseliana* Mont. *C. Hbk. No.* 2369.

On dead leaves of box. Autumn.

East. —— Forth Tay —— Moray ——
West. —— —— ——
England. Europe.

1877. N. peziza Fr. *C. Hbk. No.* 2358.

On decayed stumps. Spring—Autumn.

East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1878. N. aurea Grev. *Sphæria, Sc. Crypt. Fl. t.* 47. *C. Hbk. p.* 785.

Orange or golden yellow; perithecia scattered or gregarious, ovate, waxy, slightly darker at the ostiolum; asci cylindrical; sporidia uniseriate, elliptical, hyaline, uniseptate, not constricted at the septum, rounded at the sides, ·017 × ·0075 mm.

Described by Dr. M. C. Cooke from authentic specimens in the Berkeley Herbarium.

On semiputrid fungi. *Polyporus squamosus.* Sept.

East. —— Forth —— —— —— ——
West. —— —— —— ——
Newliston Woods, 1822. Greville.

1879. N. sanguinea Fr. *C. Hbk. No.* 2360.

On broom twigs, *Sphæriæ*, &c. April.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1880. N. epigoea Cooke. *In. litt.*

Orange-red or scarlet; perithecia subglobose, flattened above, with a depressed, punctiform ostiolum, externally slightly granular, seated upon a thin, white, byssoid mycelium; asci cylindrical; sporidia elliptical, uniseriate, hyaline, uniseptate, not constricted, ·013 × ·005 mm.

Nearest to *N. sanguinea*, but the perithecia are paler, not so even, and more or less surrounded by white fibrils at the base; sporidia rather narrower. We have no means of determining in what sense it differs from *N. terrestris* Crouan., with the description of which it does not accord. M. C. C.

On the ground. Oct.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Penicuik, 1878. Dr. M. C. Cooke.

1881. N. affinis Grev. *Sphæria, Sc. Crypt. Fl. t.* 186. *Eng. Fl.* v. *p.* 263.

Orange; perithecia scattered, globose, persistent, smooth, with a few whitish filaments at the base; asci cylindrical; sporidia narrowly elliptical (immature).

Dr. M. C. Cooke, who has communicated this description, points out that the specimens from Greville and also from Roussel. have perithecia about the same size as in *N. sanguinea*; the asci are scarcely so long as in that species, and the sporidia, though immature, do not at all agree with the description by Saccardo, to which this species has been referred. The sporidia apparently would not exceed ·012 mm. in length.

On *Ephebe pubescens.* Autumn.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.

1882. N. episphaeria Fr. *C. Hbk. No.* 2361.

On *Dothidea ribesia*, &c.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

1883. N. Purtoni Curr. *C. Hbk. No.* 2362.

On fir branches, especially *Pinus Abies.* Autumn.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Rosslyn Woods. Greville.

1884. N. ochraceo-pallida B. & Br. *C. Hbk. No.* 2363.

On dead elm.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England.

1885. N. umbrina Fr. *C. Hbk. No.* 2370.

On nettle stems. Dec.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Thornhill. Rev. J. Keith.
England. Europe.

1886. N. Keithii B. & Br. *No.* 1625.

Perithecia minute, pallid, crowded, furfuraceous; ostiolum distinct; sporidia fusiform, inarticulate, ·0002 ·00025 inch long; conidiophores punctiform, confluent, fleshy-grey colour; conidia ·0002 inch.

On cabbage stalks.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.

CCCLXXVI. MELANOSPORA Corda.

1887. M. caprina* Fr. *Ceratostoma, C. Hbk. No.* 2786.

Among rubbish in decayed stumps. Jan.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1888. M. vervecina Desm. *Fckl. Sym.* 126.

Perithecia gregarious, minute, globose, then depressed, covered with a white tomentose coat, seated on a brown tomentose subiculum; ostiolum long and slender; asci oblong; sporidia ovate, rather pointed at each extremity, brown, ·02 × ·012 mm. *Desm. Ann. Sc. Nat.* 2d *ser.* xvii. *tab.* 5, *fig.* a.

On whin stumps. Nov.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Clunyhill. Rev. J. Keith.
Europe.

1889. M. chionea Fr. *Corda. Icon.* i. *f.* 297.

Perithecia subglobose, solitary or confluent, superficial membranaceous, white, pilose; ostiola elongated, falcate, membranaceous, yellowish, naked, penicillate at the apex; asci clavate; sporidia ellipsoid, obtuse, brown, ·012 × ·007–·009 mm.

On fir leaves in damp places. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
Europe.

B.—DOTHIDIAEI.

CCCLXXVII. POLYSTIGMA Pers.

1890. P. rubrum Pers. *C. Hbk. No.* 2410.

On leaves of *Prunus spinosa*, &c. Summer—Autumn.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

1891. P. fulvum D. C. *C. Hbk. No.* 2411.

On leaves of *Prunus padus*. Autumn.

East. —— —— —— Dee Moray ——
West. —— —— —— ——

Europe. India.

CCCLXXVIII. DOTHIDEA Fr.

1892. D. tetraspora* B. & Br. *C. Hbk. No.* 2422.

On dead leaves of *Daphne laureola* and *Ulex*. Spring.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——

1893. D. melanops Tul. *C. Hbk. No.* 2423.

On beech.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

Europe.

1894. D. ribesia * Pers. *C. Hbk. No.* 2424.
On branches of currant and gooseberry. Summer—Autumn.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe. America.

1895. D. rosae * Fr. *C. Hbk. No.* 2425.
On stems of wild rose.

East.	Tweed	——	Tay	——	Moray	——
West.	——	Clyde	——	——		

England. Europe.

1896. D. sambuci Fr. *Sys. Myc.* ii. *p.* 551. *Grevillea*, vii. *p.* 79.
Erumpent, orbicular, rather flattened, black, soft within, becoming cinereous; sporidia oblong, uniseptate, ·018 × ·008 mm.
On elder.

East.	——	——	——	Dee	——	——
West.	——	Clyde	——	——		

Europe.

1897. D. ulmi Fr. *C. Hbk. No.* 2412.
On leaves of elm. Autumn.

East.	——	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe.

1898. D. betulina * Fr. *C. Hbk. No.* 2413.
On leaves of birch. Summer—Autumn. 2000 ft.

East.	——	——	Tay	Dee	Moray	——
West.	——	——	——	Ross		

England. Europe.

1899. D. podagrariae * Fr. *C. Hbk. No.* 2415.
On leaves of *Ægopodium*. Summer.

East.	——	Forth	Tay	——	——	——
West.	——	Clyde	——	——		

England. Europe.

1900. D. junci * Fr. *C. Hbk. No.* 2417.
On rushes. Summer—Autumn. 2000 ft.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe.

1901. D. graminis * Fr. *C. Hbk. No.* 2418.

On grass. Summer.

East. Tweed —— Tay Dee Moray ——
West. —— Clyde —— ——

England. Europe. America. Ceylon.

— **1902. D. caricis** Fr. *C. Hbk. No.* 2419.

On *Carices.*

East. —— —— Tay —— —— ——
West. —— —— —— ——

Forfarshire, West Water. Gardiner.
Europe.

1903. D. Johnstoni B. & Br. *C. Hbk. No.* 2420.

On leaves of *Epilobium.*

East. Tweed —— Tay —— —— ——
West. —— —— —— ——

Berwick. Johnstone. Perth. Dr. B. White.

1904. D. pteridis Fr. *C. Hbk. No.* 2421.

On fronds of fern.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
England. Europe. America.

1905. D. filicina * Fr. *C. Hbk. No.* 2427.

On stems of *Pteris aquilina.* Jan.—Dec.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross

England. Europe. Ceylon.

1906. D. angelicae Fr. *Sys. Myc.* ii. *p.* 561.

Hypophyllous, forming spots, fuscous-black, fibroso-reticulate; cells rather prominent, distant, black.

On leaves of *Angelica.* Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Findhorn. Dr. B. White.
Kamtschatka.

CCCLXXIX. ISOTHEA Fr.

1907. I. rhytismoides Fr. *C. Hbk. No.* 2801.

On dead leaves of *Dryas.* Summer—Autumn. 2000 ft.

East. —— —— Tay Dee —— Sutherland.
West. —— —— —— ——
England. Europe.

1908. I. pustula* Berk. *C. Hbk. No.* 2802.

On dead oak leaves. Spring.

East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

CCCLXXX. STIGMATEA Fr.

1909. S. conferta Fr. *C. Hbk. No.* 2791.

On leaves of *Vaccinium uliginosum.* Sept. 2000 ft.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——
Glencoe. C. Hbk. Ben Lawers.
Europe.

1910. S. geranii* Fr. *C. Hbk. No.* 2792.

On leaves of *Geranium sylvaticum.* May—Oct. 1200 ft.

East. —— Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

1911. S. ranunculi* Fr. *C. Hbk. No.* 2793.

On leaves of *Ranunculi.* Autumn.

East. Tweed —— Tay —— —— ——
West. —— —— —— Ross
Europe.

1912. S. Robertiani* Fr. *C. Hbk. No.* 2794.

On leaves of *Geranium Robertianum.* Autumn.

2200 ft.

East. —— Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe.

1913. S. potentillae Fr. *C. Hbk. No.* 2795.

On *Potentilla argentea.* Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Perth. Dr. B. White.
England. Europe.

1914. S. chaetomium Fr. *C. Hbk. No.* 2798.

On raspberry leaves. Autumn.

East. —— —— Tay Dee —— ——
West. —— —— —— ——
England. Europe.

CCCLXXXI. HYPOSPILA Fr.

1915. H. quercina* Fr. *C. Hbk. No.* 2799.

On dead oak leaves. Autumn—Winter.

East. —— —— Tay —— —— ——
West. —— Clyde —— ——
England. Europe.

1916. H. populina* Fr. *C. Hbk. No.* 2800.

On dead poplar leaves. Autumn.

East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

CCCLXXXII. MELOGRAMMA Tul.

C.—XYLARIAEI.

CCCLXXXIII. XYLARIA Fr.

1917. X. polymorpha* Grev. *C. Hbk. No.* 2371.
On old stumps. Jan.—Dec.
East. Tweed Forth Tay —— —— ——
West. Solway —— —— ——
England. Europe. America. Australia. Ceylon.

1918. X. digitata* Grev. *C. Hbk. No.* 2372.
On old stumps. Nov.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe. America. Ceylon.

1919. X. hypoxylon* Grev. *C. Hbk. No.* 2374.
On old stumps. Jan.—Dec. 1500 ft.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe. America. Australia. Ceylon. Philippines.

Var. **cupressina.*** Glamis. J. S.

1920. X. carpophila Fr. *C. Hbk. No.* 2375.
On beech mast. Spring—Summer.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1921. X. Scotica Cooke. *Grevillea*, iv. *p.* 112.

Suberose; stem very long, pallid, rootlike, slender, 1–3 times dichotomously branched above; branches elongated or very short and fasciculate; heads elongated subcylindrical; apex more or less acute, greyish-brown, then black; perithecia very numerous, slightly papillate; asci cylindrical; sporidia uniseriate, elliptical, brown, minute, ·005–·006 × ·003 mm. Clubs about 1 inch long Entire length, including rooting base, 2–6 inches. Commonly 6–8 heads arise from the rooting stem.

A very striking species, differing in appearance from all the others. It was exhibited at the Perth Fungus Show in 1875.

On the ground in wood. Sept.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Meikleour Woods, 1875. D. Matheson.

CCCLXXXIV. PORONIA Fr.

1922. P. punctata Fr. *C. Hbk. No.* 2379. *Grev. t.* 327.

On dung and hot-beds. Jan.—Dec.

Recorded by Greville as gathered in the North of Scotland, but no particular locality is given. It has not been met with in Scotland since.

England. Europe.

CCCLXXXV. THAMNOMYCES Ehr.

CCCLXXXVI. USTULINA Tul.

1923. U. vulgaris * Tul. *C. Hbk. No.* 2381.

On stumps. April.—Nov.

East. —— Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America. Ceylon.

CCCLXXXVII. HYPOXYLON Fr.

1924. H. concentricum * Grev. *C. Hbk. No.* 2384.

On dead wood, especially ash. Spring—Autumn.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America. Australia. Ceylon. Aru.

1925. H. coccineum * Bull. *C. Hbk. No.* 2385.

On dead beech. Spring—Summer.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

1926. H. multiforme * Fr. *C. Hbk. No.* 2386.

On dead beech, birch, &c. Spring—Autumn.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde Argyle Ross

England. Europe. America. Bermuda.

1927. H. fuscum * Fr. *C. Hbk. No.* 2390.
On hazel, &c. Spring—Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1928. H. rubiginosum * Fr. *C. Hbk. No.* 2391.
On dead branches. Spring—Autumn.
East. Tweed Forth Tay —— —— ——
West. Solway —— Argyle ——
England. Europe. America. Ceylon.

1929. H. atro-purpureum Fr. *C. Hbk. No.* 2392.
On rotten wood.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe.

1930. H. serpens * Fr. *C. Hbk. No.* 2393.
On dead wood, especially oak. Spring—Autumn.
East. Tweed —— Tay —— Moray ——
West. —— —— Argyle ——
England. Europe. America. Siberia.

1931. H. udum * Fr. *C. Hbk. No.* 2394.
On dead wood. Jan.—Dec.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

CCCLXXXVIII. NUMMULARIA Tul.

CCCLXXXIX. EUTYPA Tul.

1932. E. Acharii * Tul. *C. Hbk. No.* 2396.
On dead sycamore, lime, and ivy. Spring.
East. Tweed —— Tay —— Moray ——
West. —— —— ——
England. Europe.

1933. E. lata * Tul. *C. Hbk. No.* 2397.
On dead wood. Summer—Autumn.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1934. E. flavo-virens * Tul. *C. Hbk. No.* 2398.
On dead branches Spring—Summer.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1935. E. spinosa * Tul. *C. Hbk. No.* 2399.
On dead wood. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

1936. E. leioplaca * Fr. *C. Hbk. No.* 2400.
On dead wood. Spring.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

1937. E. aspera * Fr. sub *S. eutypa b. Sys. Myc.* ii. *p.* 478. *B. & Br. No.* 1726. *Grevillea*, vi. *p.* 128.

Stroma effused; perithecia immersed, globose; ostiola rather prominent, elongated, somewhat rounded, rough; sporidia sausage-shaped, hyaline.

On dead oak. May.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1877. J. S.
Europe. America.

CCCXC. DIAPORTHE Ntke (in part).

Stroma formed of the discoloured matrix; perithecia gregarious in definite spots, or broadly effused, often circumscribed by a black line; when covered, forming

definite discoloured patches, rostellate, erect, not convergent, or united into a disc; sporidia hyaline, often narrowly fusiform and quadrinucleate.

This genus is not accepted in the sense usually adopted on the Continent, that is, including within it all species, whether of *Diatrype* or *Valsa*, having quadrinucleate sporidia, but—having regard first to the characters above indicated, irrespective of the sporidia—associating such species of which *Sphæria spiculosa* and *Sphæria inquilina* may be regarded as the type. *Grevillea, vol.* vii. *p.* 80.

1938. D. velata Pers. *Sphæria, C. Hbk. No.* 2638.
On lime twigs.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe. America.

1939. D. pulla Nke. *Sphæria, C. Hbk. No.* 2647.
On ivy.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England. Europe.

1940. D. inaequalis Curr. *Diatrype, C. Hbk. No.* 2440.
On furze.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Altyre. Rev. J. Keith.
England. Europe.

1941. D. Badhami Curr. *Diatrype, C. Hbk. No.* 2446.
On furze.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England.

1942. D. nucleata Curr. *Diatrype, C. Hbk. No.* 2445.
On whin.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.
England.

1943. D. inquilina Fr. *Sphæria, C. Hbk. No.* 2648.

On dead stems of *Umbelliferæ.*

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

1944. D. lirella M. & N. *Sphæria, C. Hbk. No.* 2685.

On dead herbaceous stems.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
England. Europe.

1945. D. acus Blox. *Sphæria, C. Hbk. No.* 2686.

On dock stem.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Dupplin. Dr. M. C. Cooke.
England.

1946. D. ceramblycola B. & Br. *Diatrype, No.* 1725.

Pustules elongated, bullate; ostiola rather prominent, rough; sporidia fusiform, 3–4 nucleate, ·0035 inch long.

On cabbage stalks. April.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.

1947. D. spiculosa Pers. *Sphæria, C. Hbk. No.* 2647.

On willow.

East. —— Forth —— —— —— ——
West. —— —— Argyle ——

England. Europe. America.

1948. D. quadrinucleata Curr. *Sphæria, C. Hbk. No.* 2661.

On twigs of honeysuckle.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sanquhar. Rev. J. Keith.
England.

Dr. M. C. Cooke regards *D. spiculosa*, and *D. quadrinucleata* as uncertain species. The latter may probably be excluded. I have therefore placed them in their present position.

D.—VALSEI.

CCCXCI. DIATRYPE Fr.

1949. D. quercina* Fr. *C. Hbk. No.* 2429.
On oak. Spring.
East. —— Forth Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1950. D. aspera* Fr. *C. Hbk. No.* 2430.
On dead oak.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

1951. D. favacea Fr. *C. Hbk. No.* 2431.
On birch. Autumn.
East. Tweed —— Tay —— Moray ——
West. Solway —— —— ——
England. Europe. America.

1952. D. verrucaeformis* Fr. *C. Hbk. No.* 2432.
On oak.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1953. D. angulata Fr. *C. Hbk. No.* 2433.
On dead branches of lime.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Edinburgh. Greville. Fl. Ed.
England. Europe.

1954. D. stigma* Fr. *C. Hbk. No.* 2434.
On sticks, especially hawthorn. Spring.
East. Tweed Forth Tay —— Moray ——
West. Solway Clyde —— ——
England. Europe. America.

1955. D. disciformis * Fr. *C. Hbk. No.* 2435.
On beech. Autumn—Winter.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe. America.

1956. D. bullata Fr. *C. Hbk. No.* 2436.
On willow.

East.	Tweed	——	——	——	——	——
West.	——	——	——	——		

Jedburgh. A. Jerdon.
England. Europe. America.

1957. D. hystrix Fr. *C. Hbk. No.* 2437.
On hazel.

East.	Tweed	——	Tay	——	——	——
West.	——	——	Argyle	——		

England. Europe. America.

1958. D. corniculata B. & Br. *C. Hbk. No.* 2438.
On dead branches.

East.	——	Forth	——	——	——	——
West.	——	——	——	——		

Edinburgh. Greville, Fl. Ed.
England. Europe. America.

1959. D. undulata Fr. *C. Hbk. No.* 2443.
On dead branches of thorn.

East.	Tweed	Forth	——	——	——	——
West.	——	——	——	——		

England. Europe. America.

1960. D. strumella Fr. *C. Hbk. No.* 2444.
On twigs of currant.

East.	Tweed	——	——	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

1961. D. ferruginea Fr. *C. Hbk. No.* 2447.
On hazel.

East.	Tweed	Forth	——	——	Moray	——
West.	——	——	——	——		

England. Europe.

CCCXCII. MELANCONIS Tul.

1962. M. stilbostoma * Tul. *C. Hbk. No.* 2454.
On dead wood, especially birch. Autumn.

East.	——	Forth	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe. America. Siberia.

1963. M. alni Tul. *C. Hbk. No.* 2455.
On alder.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Forres. Rev. J. Keith.
England. Europe.

1964. M. lanciformis Tul. *C. Hbk. No.* 2458.
On hazel.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe.

1965. M. longipes Tul. *C. Hbk. No.* 2459.
On oak sticks.

East.	——	Forth	——	——	Moray	——
West.	——	——	——	——		

England. Europe.

CCCXCIII. VALSA Fr.

1.—VALSELLA. Sporidia simple, hyaline.

1966. V. stellulata * Fr. *C. Hbk. No.* 2461.
On elm branches. Spring—Summer.

East.	Tweed	——	Tay	——	Moray	——
West.	——	Clyde	——	——		

England. Europe. America.

1967. V. prunastri * Fr. *C. Hbk. No.* 2460.
On dead wood. Spring—Summer.

East.	Tweed	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe. America.

1968. V. nivea Fr. *C. Hbk. No.* 2463.
On *Prunus padus*, poplar, and hawthorn.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1969. V. leucostoma Fr. *C. Hbk. No.* 2464.
On *Prunus padus*.
East. Tweed —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

1970. V. Kunzei Fr. *C. Hbk. No.* 2465.
On larch. Spring.
East. —— —— —— Moray ——
West. —— —— —— ——
Mondole. Rev. J. Keith.
England. Europe.

1971. V. salicina Fr. *C. Hbk. No.* 2476.
On branches of willow.
East. Tweed —— —— Dee Moray ——
West. —— —— —— ——
England. Europe. America.

1972. V. dissepta* Fr. *C. Hbk. No.* 2467.
On dead elm. Spring—Autumn.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1973. V. controversa Fr. *C. Hbk. No.* 2468.
On dead branches.
East. —— —— Tay —— —— ——
West. —— —— —— ——
The Burn, Forfarshire. Rev. M. L. Anderson, Rev. J. Fergusson.
England. Europe.

1974. V. coronata Fr. *C. Hbk. No.* 2471.
On dry branches of oak, dog-rose, and hawthorn.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe. America.

1975. V. ceratophora Tul. *C. Hbk. No.* 2472.
On oak branches.
East. —— —— —— —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

1976. V. abietis Fr. *C. Hbk. No.* 2473.
On silver fir.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe.

1977. V. ambiens Fr. *C. Hbk. No.* 2475.
On apple, hawthorn, &c.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1978. V. pulchella Fr. *C. Hbk. No.* 2481.
On birch post.
East. Tweed Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

1979. V. quaternata * Fr. *C. Hbk. No.* 2482.
On dead beech bark. Spring—Autumn.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

1980. V. hypodermia * Fr. *C. Hbk. No.* 2483.
On dead wood. Spring.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

2.—Tuberculostoma. Sporidia linear, or filiform.

1981. V. suffusa Fr. *C. Hbk. No.* 2485.
On alder. Summer.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England. Europe.

3.—VALSARIA. Sporidia uniseptate, hyaline.

1982. V. leiphemia Fr. *C. Hbk. No.* 2490.
On oak branches.
East. Tweed Forth —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

1983. V. tiliae Tul. *C. Hbk. No.* 2496.
On lime twigs. Nov.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe.

1984. V. crataegi * Curr. *C. Hbk. No.* 2497.
On branches of hawthorn. Spring.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England.

1985. V. stilbostoma * Fr. *C. Hbk. No.* 2498.
On dead branches, hazel, &c. Spring—Autumn.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1986. V. circumscripta Mont. *C. Hbk. No.* 2500.
On hazel.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe.

1987. V. taleola * Fr. *C. Hbk. No.* 2502.
On dead branches. Spring.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

1988. V. thelebola Fr. *C. Hbk. No.* 2503.
On alder. April.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Greeshop. Rev. J. Keith.
England. Europe.

1989. V. turgida * Fr. *C. Hbk. No.* 2504.
On dead beech. Summer.

East.	Tweed	Forth	Tay	——	——	——
West.	——	——	——	——		

England. Europe. America.

1990. V. convergens Fr. *C. Hbk. No.* 2505.
On smooth bark.

East.	Tweed	——	——	——	——	——
West.	——	——	——	——		

Berwick. Johnstone.
England. Europe.

1991. V. platanoides Berk. *C. Hbk. No.* 2508.
On sycamore. Spring.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Greeshop. Rev. J. Keith.
England. Europe.

1992. V. profusa * Fr. *C. Hbk. No.* 2511.
On dead branch of *Acacia*. Spring.

East.	Tweed	——	Tay	——	——	——
West.	——	——	——	——		

England. Europe.

1993. V. vestita Fr. *C. Hbk. No.* 2514.
On sloe. Spring.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Sanquhar. Rev. J. Keith.
England. Europe.

1994. V. Curreyi Nke. *Pyren. Germ. p.* 201.

Perithecia 3–15, usually 7–8 in each pustule, which are but slightly elevated, splitting the cuticle in a stellate manner; ostiola convergent, rather short, shining.

Spermagonia often occupying the centre of the pustule, from which the small linear spermatia issue in reddish tendrils. Asci clavate; sporidia sausage-shaped ·012 – ·016 × ·003 mm.

On fir branches.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Dupplin Castle. Dr. M. C. Cooke.
England.

CCCXCIV. CUCURBITARIA Gray.

1995. C. laburni De Not. *C. Hbk. No.* 2516.
On dead branches of laburnum.
East. Tweed —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

1996. C. elongata * Grev. *C. Hbk. No.* 2517.
On dead branches of whin, &c. Spring.
East. —— Forth Tay —— Moray ——
West. —— —— —— ——
Europe. America.

1997. C. spartii De Not. *C. Hbk. No.* 2518.
On dead branches of broom.
East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

1998. C. berberidis Gray. *C. Hbk. No.* 2520.
On dead branches of berberry.
East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

1999. C. cupularis Fr. *C. Hbk. No.* 2524.
On dead branches of *Prunus padus.*
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe.

CCCXCV. GIBBERA Fr.

2000. G. vaccinii Fr. *C. Hbk. No.* 2525.
On living *Vaccinium vitis-idæa.* 2000 ft.
East. —— —— Tay Dee Moray ——
West. —— —— —— ——
England. Europe.

2001. G. pulicaris* Tul. *Nectria, C. Hbk. No.* 2344.
On decaying broom branches.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

E.—SPHÆRIÆI.

CCCXCVI. MASSARIA De Not.

2002. M. siparia Tul. *C. Hbk. No.* 2527.
On birch posts.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Waterford. Rev. J. Keith.
England. Europe.

2003. M. foedans Fr. *C. Hbk. No.* 2529.
On dead elm.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe.

2004. M. bufonia Tul. *C. Hbk. No.* 2532.
On oak sticks. Spring.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe.

CCCXCVII. LOPHIOSTOMA De Not.

2005. L. macrostoma Tode. *C. Hbk. No.* 2537.
On *Salix aurita.* Aug.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Alvie. Rev. J. Keith.
England. Europe.

2006. L. nucula Fr. *C. Hbk. No.* 2540.

On oak bark.

East. —— Forth —— —— —— ——
West. —— —— —— ——

Lasswade. Greville. Eng. Fl.
England. Europe.

2007. L. angustilabra B. & Br. *C. Hbk. No.* 2542.

On furze branches. Dec.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Balnageith. Rev. J. Keith.
England.

2008. L. Jerdoni B. & Br. *C. Hbk. No.* 2545.

On *Rubus idœus*, and elm.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.

2009. L. arundinis De Not. *C. Hbk. No.* 2547.

On stems of *Arundo*.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Kinrara. Rev. J. Keith.
England. Europe. America.

CCCXCVIII. CERATOSTOMA Fr.

Perithecia superficial, or semi-immersed, scattered or gregarious; ostiolum elongated, cylindrical, free, longer than the perithecium, emergent. *Grevillea, vol.* vii. *p.* 84.

2010. C. cirrhosa* Pers. *Sphœria, C. Hbk. No.* 2625.

On rotten wood. Spring.

East. —— —— Tay —— —— ——
West. —— —— Argyle ——

England Europe. America.

2011. C. pilifera Fr. *Sphæria, C. Hbk. No.* 2626.

On dead pine. Spring.

East. —— —— Tay —— Moray ——
West. —— —— Argyle ——

England. Europe. America.

2012. C. stylophora B. & Br. *Sphæria, C. Hbk. No.* 2630.

On dead *Acer platanoides.*

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Mossburnford. A. Jerdon.

2013. C. crinigera Cooke. *Grevillea*, i. *p.* 156.

Subgregarious or scattered, black; perithecia subglobose, semi-immersed, pubescent; ostiola spinulose; asci cylindrical, narrow; sporidia uniseriate, elliptical, triseptate, hyaline (·0004–·0005 inch), ·01–·0125 mm. long.

On pine wood.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Dunoon. C. B. Plowright.

England.

CCCXCIX. BYSSOSPHAERIA Cke.

Perithecia superficial, free, seated on a tomentose subiculum of interwoven threads, at first veiled. (*Sphæria, Byssisedæ*, Fr. *Sys. Myc.* ii. *p.* 440.) *Grevillea*, vol. vii. *p.* 84.

2014. B. thelena Fr. *Sphæria, C. Hbk. No.* 2549.

On decayed wood.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.

England. Europe.

2015. B. aquila* Fr. *Sphæria, C. Hbk. No.* 2550.

On rotten hawthorn, &c.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe. America. Ceylon.

2016. B. Desmazierii B. & Br. *Sphæria, C. Hbk. No.* 2551.

On decaying branches of fir.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. America.

2017. B. phaeostroma Mont. *Sphæria, C. Hbk. No.* 2552.

On elm stick.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——

England. Europe. America.

CCCC. PSILOSPHAERIA.

Perithecia superficial, gregarious or crowded, naked, black, carbonaceous, often corrugated or tuberculate; ostiolum scarcely prominent. (*Sphæria, Denudatæ* Fr. *Sys. Myc.* ii. *p.* 452). *Grevillea, vol.* vii. *p.* 84.

2018. P. spermoides* Hoffm. *Sphæria, C. Hbk. No.* 2576.

On rotten wood. Autumn.

East. Tweed Forth Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

2019. P. moriformis* Tode. *Sphæria, C. Hbk. No.* 2577.

On dead branches. Jan.—Dec.

East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— Ross

England. Europe. America.

2020. P. collabens Curr. *Sphæria, C. Hbk. No.* 2586.

On *Salix*. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J. Keith.
England.

2021. P. pulviscula* Curr. *Sphæria, C. Hbk. No.* 2587.
On oak. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England.

2022. P. mammaeformis Pers. *Sphæria, C. Hbk. No.* 2589.
On dead yew.
East. Tweed —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael. Jedburgh. A. Jerdon.
England. Europe. America. Bermuda.

2023. P. obducens Fr. *Sphæria, C. Hbk. No.* 2590.
On dead branches.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe. America.

2024. P. pulvis-pyrius* Pers. *Sphæria, C. Hbk. No.* 2591.
On dead alder, &c. Spring. 1000 ft.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

2025. P. pulveracea Ehr. *Sphæria, C. Hbk. No.* 2600.
On dead wood.
East. —— —— —— Dee —— ——
West. —— —— —— ——
Braemar. Hooker.
England. Europe. America.

2026. P. myriocarpa* Fr. *Sphæria, C. Hbk. No.* 2600.
On dead wood. Jan.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis, 1874. J. S.
England. Europe. America.

This is recorded in the "Handbook" as the *Pycnidia* of *S. pulveracea*. My specimens, which were submitted to Dr. Capron, were truly asciferous. I therefore, meanwhile, retain it as a separate species.

2027. P. nigerrima Blox. *Sphæria, C. Hbk. No.* 2612.

On *Eutypa lata.*

East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England.

2028. P. thallophila Cooke. *Sphæria, C. Hbk. No.* 2614.

On thallus of *Lecanora subfusca.* Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glenshee, 1856. Dr. Lauder Lindsay.

2029. P. ventosaria Linds. *Sphæria, C. Hbk. No.* 2615.

On *Lecanora ventosa.*

East. —— —— —— Dee —— ——
West. —— —— —— ——
Lochnagar. Dr. Lauder Lindsay.

2030. P. dioica Moug. *Sphæria, C. Hbk. No.* 2616.

On branches.

East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe.

2031. P. lonicerae Sow. *Sphæria, C. Hbk. No.* 2620.

On honeysuckle.

East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England. Europe. America.

2032. P. Stevensoni* B. & Br. *Sphæria, B. & Br. No.* 1728.

Perithecia scattered, here and there crowded, ovate, attenuated upwards; asci slender; sporidia uniseriate, narrowly elliptical, 2-3 nucleate; sporidia ·0002 inch long.

On dead wood. May.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den, 1877. J. S.

2033. P. lichenicola De Not. *Sphæria, Grevillea*, i. *p.* 156.

Perithecia innate, erumpent, scattered or crowded, rounded, verrucose, black, pierced with a punctiform ostiolum which is scarcely conspicuous, and impressed; asci clavate; sporidia cylindrical, obtuse, sometimes curved, at first binucleate, at length quadrilocular and slightly coloured (·0015–·002 inch) ·04–·05 mm. long.

On thallus of *Solorina crocea*. 3984 ft.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Ben Lawers. Dr. James Stirton.

2034. P. cetrariicola Nyl. *Sphæria, Grevillea*, iii. *p.* 68.

Perithecia somewhat gregarious, minute, black, rather prominent; asci octosporous; sporidia oblong, 1–3-septate, colourless; paraphyses none.

On *Cetraria Islandica*.

East. —— —— —— Dee —— ——
West. —— —— —— ——

Braemar. Rev. J. Crombie.
Europe.

CCCCI. LASIOSPHAERIA Not. (in part).

Perithecia superficial, more or less villous, hairy or strigose, sometimes seated among Dematioid threads. (*Sphæria, Villosæ*, Fr.) *Grevillea, vol.* vii. *p.* 85.

2035. L. racodium Fr. *Sphæria, C. Hbk. No.* 2553.

On decaying beech. Summer.

East. —— Forth —— —— Moray ——
West. —— —— —— ——

England. Europe. America.

2036. L. ovina * Pers. *Sphæria, C. Hbk. No.* 2557.

On decayed wood. Spring.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

2037. L. brassicae Klotzsch. *Sphæria, C. Hbk. No.* 2558.

On dead cabbage stalks. Winter—Spring.

East. Tweed —— —— —— Moray ——
West. —— —— Argyle ——

England. America.

2038. L. hirsuta * Fr. *Sphæria, C. Hbk. No.* 2559.
On dead wood. Spring—Autumn.
East. —— Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

2039. L. hispida Tode. *Sphæria, C. Hbk. No.* 2560.
On decayed wood.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe. America.

2040. L. capillifera Curr. *Sphæria, C. Hbk. No.* 2561.
On decayed stick.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Altyre. Rev. J. Keith.
England.

2041. L. canescens Pers. *Sphæria, C. Hbk. No.* 2564.
On decayed apple and beech. Summer.
East. —— —— Tay —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

2042. L. strigosa A. & S. *Sphæria, C. Hbk. No.* 2565.
On fir wood.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
Europe. America.

2043. L. calva Tode. *Sphæria, C. Hbk. No.* 2568.
On dead branches.
East. —— Forth —— —— —— ——
West. —— —— —— ——
Auchindenny Woods. Greville.
England. Europe.

2044. L. mutabilis * Pers. *Sphæria, C. Hbk. No.* 2569.
On rotten wood. Summer—Autumn.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

2045. L. scabra Curr. *Sphæria, C. Hbk. No.* 2570.
On broom stick.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England.

2046. L. callimorpha Mont. *Sphæria, C. Hbk. No.* 2571.
On dead stems of bramble.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Jedburgh. A. Jerdon.
England. Europe.

2047. L. innumera* B. & Br. *Sphæria, C. Hbk. No.* 2578.
Chætosphæria Tul. *B. & Br.* sub. *No.* 1728.
Sporidia ·0003–·0035 inch long.
On dead wood. May.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis Den. J. S.
England. Europe.

2048. L. ruborum Lib. *Sphæria, C. Hbk. No.* 2584.
On bramble stems.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England. Europe.

2049. L. epochnii B. & Br. *Sphæria, C. Hbk. No.* 2592.
Only the conidia, *Sporidesmium atrum.* Grev.
On *Corticium.* Autumn.
East. —— Forth —— —— Moray ——
West. —— —— Argyle ——
England. Europe.

CCCCII. SORDARIA Winter.

Perithecia crowded or scattered, coriaceo-membranaceous, semi-immersed, attenuated above or papillate, covered at first with an evanescent tomentum, or hairy above,

sometimes nestling in a pseudostroma. *Grevillea*, vol. vii. *p.* 85.

2050. S. fimeti Fr. *Massaria, C. Hbk. No.* 2536.

On horse and cow dung.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.
England. Europe. America.

2051. S. coprophila Ces. de Not. *C. Hbk. No.* 2594.

On cow-dung. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Alvie, &c. Rev. J. Keith.
England. Europe. America.

2052. S. fimicola Rob. *C. Hbk. No.* 2596.

On dog's dung. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J. Keith.
England. Europe.

2053. S. merdaria Fr. *Sphæria, Grevillea*, iv. *p.* 123.

Perithecia single or in groups of 2 or 3, surrounded by a stroma, which is black, shining, and semi-immersed in the matrix; perithecia rugulose, dark brownish-black, shortly conical; ostiola obtuse: asci elongato-cylindrical; sporidia 8 ovate, simple, or with a nucleus, opaque, black, surrounded by gelatin, ·001 × ·0004 inch.

On rabbit's dung. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.
England. Europe.

2054. S. humana Awd. *Winter. Sord. p.* 21.

Perithecia densely gregarious, immersed, globose, black, with short cylindrical or slightly conical ostiola, erumpent, smooth above; base of perithecia clothed with black, septate filaments; asci cylindrical, shortly pedicellate, apex truncate or obtuse, octosporous, 133 mk. long, 15 mk. wide; paraphyses tubular, articulate, the length of the

asci or slightly longer; sporidia uniseriate, oval, or ovato-globose, blackish-brown, surrounded by gelatin, 21 mk. long, 15 mk. wide.

On merdam humanam. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Grantown. Rev. J. Keith.

Europe.

2055. S. fimiseda Cès & De Not. *Winter. Sord. p.* 25, *t.* ix. *f.* 13.

Perithecia scattered or in groups of 2 or 3. superficial, ovato-conical, for the most part attenuated into a thick conical curved neck, fuscous-black, densely beset with septate hairs of the same colour, surrounded at the base with creeping, paler hairs, 1–1½ mill. high; asci cylindrical, with long pedicels, 518 mk. long (with a smaller pedicel), 45 mk. broad, 4–8 spores; paraphyses filiform, septate, twice as long as the asci; sporidia subdistichous, fuscous-black, ovate, appendiculate at both ends, terminal appendage thick, nearly straight, equalling the sporodium, inferior appendage cylindrical, curved, for the most part equalling the sporodium, or double or triple longer, hyaline, with a second appendage at the base. Sporidia without appendages 52 mk. long, 28 mk. thick.

On cow dung. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.

Europe.

2056. S. microspora Ph. & Pl. *Grevillea*, vi. *p.* 28, *t.* 94, *f.* 3.

Perithecia scattered, rather large, obtusely conical, the upper free portion covered by short stiff bristles, about 40 mk. in length; towards the base giving attachment to a few delicate mycelial threads; asci cylindrical, 45-50 × 6–8 mk.; sporidia 8 uniseriate, subrotund, discoid, minute, involved in gelatin, 5-7 mk. About 2 mk. in thickness.

On cow's dung. Autumn.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Rothiemurchus. Rev. J. Keith.

2057. S. discospora Awd. *Grevillea*, ii. *p.* 187, *Pl.* 25, *f.* 2.

Perithecia scattered, minute, globose, with an obtusely conical ostiolum, covered by dense, black, short, rigid setæ; asci cylindrical, somewhat truncate at the apex; sporidia involved in mucus, subrotund, discoid, dark-brown or black, ·012 mm. (·0004 inch) in diameter, ·003–·005 mm. (·001 inch) thick.

Known immediately by its disc-shaped sporidia.

On rabbit's dung.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sanquhar. Rev. J. Keith.

Europe.

2058. S. platyspora Ph. & Pl. *Grevillea*, vi. *p.* 28, *t.* 94, *f.* 2.

Perithecia scattered, semi-immersed in the matrix, obtusely-conical, medium sized, covered by a number of short, stiff, coarse hairs, or hair-like processes; asci cylindrical, sessile, 130 × 12 mk.; sporidia 8 nearly circular, disc-shaped as a rule, uniseriate, 20 × 18–15 mk.; 2–3 mk. in thickness.

On horse dung.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J. Keith.

2059. S. curvula De By. (conica Fckl.) *Morph. Pilze*, *p.* 209.

Perithecia scattered, superficial, rarely semi-immersed, oblongo-conical, often curved, wrinkled, densely clothed with hairs, which are thick, articulated, for the most part fasciculate as if cemented together, fuscous, 380–400 mk. broad, 750–800 mk.; asci cylindrical with very long pedicel, 8 spored, 129 × 38 (without pedicel); paraphyses tubular, articulated, length of asci; sporidia ovate, simple dark brown, attenuated at both ends, apex either with a small appendage or without one, terminal appendage thick and curved, or thin, cylindrical, and straight, shorter than the spore, hyaline. Sporidia (without appendage) 20 × 15 mk.

S. conica Fckl. and *S. breviseta* Rbh. have been united by Winter as variety (*coronata*) of the above.

On cow dung. Spring.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith. Rannoch. Dr. B. White.
England. Europe.

Sub-genus DELITSCHIA. Spores septate.

2060. S. Winteri Ph. & Pl. *Grevillea*, ii. *p.* 188, *Pl.* 25.

Perithecia immersed, spherical, black; ostiolum elongated, cylindrical, tuberculose, rugulose, frequently somewhat curved; asci cylindrical, octosporous; sporidia involved in mucus, uniseptate, black-brown, elliptical.

The perithecia are completely immersed in the matrix, only the tips of the ostiola being visible. The sporidia are at first greenish-yellow, then clear brown, becoming eventually almost black, when young surrounded by a gelatinous envelope, which subsequently disappears. They exhibit a tendency to fall in halves at the septum, ·003 inch long by ·001 inch wide (·062mm.–·028 mm).

On rabbit's dung.

East. —— —— —— —— Moray ——
West. —— —— —— ——

In many places. Rev. J. Keith.
England.

2061. S. bisporula Hans. *Fung. Fim. Dan. p.* 107. *Grevillea*, vi. *t.* 94, *f.* 4.

Perithecia pyriform, surmounted by a few stiff bristle-like hairs, 200 mk., base covered by mycelium, black; asci cylindrical, sessile, 120–150 × 13–18 mk.; sporidia uniseriate, uniseptate, dark brown, involved in gelatin, constricted at the septum, 18–27 × 8–12 mk.; paraphyses the length of asci, after anastomosing.

On horse dung.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.

Europe.

2062. S. minutella Fckl. sub. *Delitschia minuta. Symb. Mycol. p.* 242. *Grevillea*, vi. *t.* 94, *f.* 5.

Perithecia much smaller than those of *D. Auerswaldii*, covered, globose, minutely papillate, black; asci sessile, cylindraceo-elongate, 8 spores, 136 mk. long, 14 mk. thick; sporidia in one row (uniseriate), oblongo-ovate, dydymous, constricted in the middle, fuscous, at length somewhat opaque, surrounded with a narrow, hyaline ring. 22 mk. long, 8 mk. thick.

On sheep's dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J. Keith.

Europe.

CCCCIII. SPORORMIA Awd.

Perithecia minute, membranaceous, immersed in dung, sporidia breaking up into joints. *Grevillea, vol.* vii. *p.* 86.

2063. S. intermedia Awd. *Sphæria sporormia. C. Hbk. No.* 2593.

On rabbit's dung. Common.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.

England. Europe.

2064. S. megalospora Awd. *Hedwigia*, 1868, *p.* 68.

Perithecia immersed, globose or ovoid, fleshy-membranaceous, ostiolum wart-like or mammiform, black; asci elongato-oval, sessile 200 × 30–40, 8 spored; sporidia tetramerous, brown, straight or slightly curved, with or without a narrow investment of gelatin, 80 mk. or more long, 16–18 mk. wide, central segments 18–24 mk. long, terminal 20–34.

On horse dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J. Keith.

2065. S. octomera Awd. *Hedwigia*, 1868, *p.* 70, *t.* 1, *f.* 7. *Grevillea*, vi. *t.* 94, *f.* 6.

Perithecia globose, membranaceous, minutely papillate, immersed, black; asci clavate, base very much elongated into a hair-like stalk, 8 spored (parte sporifera), 18 mk. wide, 90 mk. long; sporidia octomerous, 40×5-6, segments 3-4, terminal segments 4-6.

On grouse dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Hill above Craigellachie, Aviemore. Rev. J. Keith.
Europe.

2066. S. pulchra Hans. *Fung. Fim. Dan. p.* 113.

Perithecia elongato-pyriform, neck usually black, straight or curved, often crooked, greenish-grey, not seldom semi-transparent, covered by mycelium, 320-420 mk. high; asci cylindrical nearly sessile, 8 spored, 160×30-38 mk.; spores 7-septate, 8 jointed, constricted, involved in mucus, brownish black, 47-57×12-14 mk.

On cow dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J Keith.
Europe.

2067. S. minima Awd. *Hedwigia*, 1868.

Perithecia globose, membranaceous, black when dry, olivaceous when moist; asci cylindrical or elongato-clavate, sessile, 85×12; sporidia tetramerous, brown, surrounded by gelatin, 32-35×6. All segments 7 mk. long, or perhaps with terminal segments slightly longer.

On grouse dung. Sept.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Aviemore. Rev. J. Keith.
Europe.

2068. S. Notarisii Ces. *Hedwigia*, 1868, *p.* 69, *t.* 1, *f.* 1.

Perithecia black, rather shining, ovoid or rounded; ostiola wart-like or mamillæform; asci cylindrical, octosporous; sporidia tetramerous, brown, not apparently surrounded by a hyaline coat, ·022-·026×·004-·005 mm.; segments of the sporidia ·005-006 mm. long. *Grevillea, vol.* iv. *p.* 113.

On grouse dung.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Rannoch. Dr. B. White.
Europe.

CCCCIV. CONISPHAERIA Cke.

Perithecia smooth, naked, conical, flattened at the base, or semi-immersed, pierced at the apex. (*Sphæria, Pertusæ*, Fr., in part.) *Grevillea*, vol. vii. p. 86.

2069. C. pertusa Pers. *Sphæria, C. Hbk. No.* 2604.

On hard wood.

East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe. America.

2070. C. Aspegrenii * Fr. *Sphæria, C. Hbk. No.* 2606.

On dead oak. Spring—Summer.

East. —— Forth Tay —— —— ——
West. —— —— —— ——
Elie, Fifeshire. Glamis. J. S.
England. Europe.

2071. C. Jenynsii B. & Br. *Sphæria, C. Hbk. No.* 2607.

On dead wood.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Mondole. Rev. J. Keith.
England.

2072. C. paecilostoma B. & Br. *Sphæria, C. Hbk. No.* 2608.

On dead wood. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Dupplin Castle. Dr. M. C. Cooke.
England.

2073. C. vilis* Fr. *Sphæria, C. Hbk. No.* 2610.

On rotten oak. Spring.

East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe.

2074. C. mastoidea* Fr. *Sphæria, C. Hbk. No.* 2611.
On decayed twig. Summer.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glamis. J. S.
England. Europe. America.

2075. C. obliterans B. & Br. *Sphæria, C. Hbk. No.* 2621.
On fir. Aug.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Rothiemurchus. Rev. J. Keith.
England.

CCCCV. XYLOSPHAERIA Cke.

Perithecia innate, immersed in the naked wood, with a short narrow erumpent ostiolum. (*Sphæria, Immersæ*, Fr.) *Grevillea, vol.* vii. *p.* 86.

2076. X. livida Fr. *Sphæria, C. Hbk. No.* 2631.
On dead branches.
East. —— —— —— —— Moray ——
West. —— —— Argyle ——
England. Europe. America.

2077. X. melanotes B. & Br. *Sphæria, C. Hbk. No.* 2632.
On stick. Spring.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Dunphail. Rev. J. Keith.
England.

2078. X. hypotephra B. & Br. *Sphæria, C. Hbk. No.* 2633.
On oak. Summer.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Sanquhar. Rev. J. Keith.
England.

2079. X. apiculata Curr. *Sphæria, C. Hbk. No.* 2635.
On paling. Summer.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Grantown. Rev. J. Keith.
England.

2080. X. parallela Fr. *Sphæria, Sys. Myc.* ii. *p.* 373. *Grevillea*, i. *p.* 174.
Immersed, black, perithecia globose; crowded in clumps which are arranged in rows; ostiola rather prominent, crowded, globose, even; asci subcylindrical; sporidia linear, obtuse, straight or curved, uniseptate, pale brown (·0004 inch), ·01 mm. long.
East. —— —— —— Dee —— ——
West. —— —— —— ——
Mar Forest. Greville. Edinburgh Herbarium.
Europe. America.

CCCCVI. SPHÆRIA Fr.

Perithecia scattered or gregarious, at first covered, piercing the cuticle with the erumpent neck rarely concealed. (*Obtectæ* Fr.) *Grevillea, vol.* vii. *p.* 86.

CORTICOLAE.

2081. S. xylostei Pers. *C. Hbk. No.* 2641.
On honeysuckle.
East. —— Forth —— —— Moray ——
West. —— —— —— ——
England. Europe.

2082. S. discutiens Berk. *C. Hbk. No.* 2643.
On elm.
East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England.

2083. S. blepharodes B. & Br. *C. Hbk. No.* 2646.
On dead twigs of sycamore.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Mossburnford. A. Jerdon.

2084. S. Berkeleyi Desm. *C. Hbk. No.* 2649.

On dead stems of *Angelica sylvestris.*

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. America.

2085. S. phomatospora B. & Br. *C. Hbk. No.* 2651.

On decaying stems of wallflower. Spring.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Waterford. Rev. J. Keith.
England.

2086. S. lanata Fr. *C. Hbk. No.* 2652.

On birch.

East. —— —— —— —— —— ——
West. —— —— Argyle ——

Appin. Carmichael.
Europe.

2087. S. pruinosa Fr. *C. Hbk. No.* 2654.

On dead branches of ash.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.
England. Europe. America.

2088. S. millepunctata Grev. *C. Hbk. No.* 2656.

On ash twigs.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——

England. Europe.

2089. S. salicella Fr. *C. Hbk. No.* 2657.

On willow. Spring.

East. —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.
England. Europe. America.

2090. S. revelata B. & Br. *C. Hbk. No.* 2660.

On sticks. Spring.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Brodie. Rev. J. Keith.
England.

2091. S. vepris De Lært. *C. Hbk. No.* 2664.

On bramble twigs.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Greeshop. Rev. J. Keith.
England. Europe.

2092. S. sepinicola Fr. *C. Hbk. No.* 2665. *S. Gardineri* B. *Fl. Forf.*

On herbaceous stems, ivy leaves, &c. Spring.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Balmerino, 1845. Gardiner.
England. Europe. America.

2093. S. clypeata* Nees. *C. Hbk. No.* 2670.

On bramble, *Cornus sanguinea*, &c. Autumn.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	Clyde	Argyle	——		

England. Europe.

2094. S. tamaricis Grev. *C. Hbk. No.* 2681.

On dead branches of *Tamarix Germanica*. Autumn—Winter.

East.	——	Forth	——	——	——	——
West.	——	——	——	——		

Carlowrie, Edinburgh. Greville. Sc. Crypt. Fl.

2095. S. abbreviata* Cooke. *Hbk. No.* 2683.

On bramble. Jan.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Glamis. J. S.
England. Europe.

2096. S. tomicum Lev. *C. Hbk. No.* 2684.
On *Aira cæspitosa*, &c.

East.	——	——	Tay	Dee	Moray	——
West.	——	——	——	——		

England. Europe.

2097. S. centhosporoides Berk. *C. Hbk. No.* 2691.
On leaves of cherry-laurel. Autumn.

East.	——	Forth	——	——	——	——
West.	——	——	——	——		

Edinburgh. Greville. Fl. Ed.

CAULICOLAE.

2098. S. rubella Pers. *C. Hbk. No.* 2700.
On dead stems of *Heracleum*, &c.

East.	Tweed	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

2099. S. acuminata * Sow. *C. Hbk. No.* 2702.
On thistle stems. Spring.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	Clyde	——	——		

England. Europe. America.

2100. S. herpotricha Fr. *C. Hbk. No.* 2704.
On grass. June.

East.	——	——	——	——	Moray	——
West.	——	——	——	——		

Greeshop. Rev. J. Keith.
England. Europe.

2101. S. acuta * Moug. *C. Hbk. No.* 2708.
On dead nettle stems. Spring.

East.	Tweed	Forth	Tay	Dee	Moray	——
West.	——	Clyde	——	Ross		

England. Europe. America.

2102. S. pellita Fr. *C. Hbk. No.* 2709.
On decayed herbaceous stems.

East.	——	——	——	——	Moray	——
West.	——	Clyde	Argyle	——		

England. Europe.

2103. S. doliolum * Pers. *C. Hbk. No.* 2710.
On stems of *Angelica*. Spring.
East. Tweed Forth Tay Dee Moray ——
West. —— Clyde —— ——
England. Europe. America.

Var. **conoidea.*** Glamis. J. S.

2104. S. complanata * Tode. *C. Hbk. No.* 2713.
On dead herbaceous stems. Jan.
East. Tweed —— Tay —— —— ——
West. —— —— —— ——
England. Europe. America.

2105. S. derasa B. & Br. *C. Hbk. No.* 2714.
On stems of ragwort. Spring—Summer.
East. Tweed —— —— —— Moray ——
West. —— —— —— ——
England. Europe.

2106. S. nigrans * Desm. *C. Hbk. No.* 2716.
On dead reed and grass. Summer.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
England. Europe.

2107. S. Ogilviensis B. & Br. *C. Hbk. No.* 2717.
On *Senecio Jacobœa*.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Dundee. W. M. Ogilvie.
Europe. America.

2108. S. modesta Desm. *C. Hbk. No.* 2718.
On dead stems of *Scrophularia*. Spring.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Glenisla, 1846. Gardiner.
Europe. America.

2109. S. sabuletorum B. & Br. *C. Hbk. No.* 2719. *B. & Br. No.* 650, *t.* 12, *f.* 36.
On dead leaves of *Ammophila arundinacea*. Spring.
East. —— —— Tay —— Moray ——
West. —— —— —— ——
Sands of Barrie, 1845. Gardiner. Findhorn. Rev. J. Keith.

2110. S. arundinacea Sow. *C. Hbk. No.* 2623.

On dead reeds.

East. Tweed —— —— —— —— ——
West. —— —— —— ——

Jedburgh. A. Jerdon.

England. Europe. America.

2111. S. culmifraga * Fr. *C. Hbk. No.* 2624.

On grass. Spring.

East. Tweed —— Tay —— Moray ——
West. —— —— —— ——

England. Europe. America.

2112. S. rostellata Fr. *C. Hbk. No.* 2725.

On bramble.

East. Tweed —— —— —— —— ——
West. —— —— Argyle ——

England. Europe.

2113. S. commanipula B. & Br. *C. Hbk. No.* 2730. *B. & Br. No.* 645, *t.* 11, *f.* 31.

On capsules of *Scrophularia*. May.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glenisla, 1846. Gardiner.

2114. S. taxi * Sow. *Eng. Fl.* v. *p.* 272. *Sphæropsis, C. Hbk. No.* 1252.

On dead leaves of yew. Autumn.

East. —— Forth Tay —— —— ——
West. —— —— —— ——

England. Europe.

In the specimens which I gathered there were distinct asci; and Dr. Capron, to whom I submitted them, pronounced them to be the true *Spæria* of the "*English Flora*." The Rev. M. L. Anderson informs me that he has examined a great many specimens, and that he invariably found asci in the plant upon the English yew, but never in that upon the so-called Irish yew.

2115. S. maculans Desm. *B. & Br. No.* 1727. *Grevillea*, vi. *p.* 128. *S. alliariæ* Awd.? *C. Hbk. No.* 2712.

Scattered, black, superficial or erumpent; perithecia minute, numerous, subglobose, seated on a blackened spot; ostiola papillæ-

form ; asci clavate ; sporidia fusiform, with 4 or 5 nuclei, then 3-5 septate, ·04 mm. long. *Desm. Ann. Sc. Nat.* 1846, vi. *p.* 77.

On dead *Brassicæ.*

East. —— —— Tay —— —— ——
West. —— —— —— ——

Perth. Dr. B. White.
Europe.

2116. S. nardi Fr. *Grevillea*, v. *p.* 120.

Scattered ; perithecia subglobose, black, covered, rather prominent ; asci cylindrical ; sporidia biseriate, fusiform, sometimes curved, 5 septate, yellowish, ·025 × ·005 mm. *Fckl. Sym. Myc. p.* 137, *t.* vi. *fig.* 28.

On *Nardus* leaves.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Forres. Rev. J. Keith.
England. Europe.

2117. S. empetri Fr. *B. & Br. No.* 1627. *Grevillea*, v. *p.* 63.

Gregarious or scattered, innate, black, at first smooth and shining, afterwards flattened and rugose ; ostiolium papillate ; sporidia linear, uniseptate, pale brown, ·007 inch long ; asci ·002 inch long.

On leaves of *Empetrum nigrum.* May.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Sow of Athol, 1874. Dr. B. White.
Europe.

SUBGENUS.—PLEOSPORA.

Sporidia large, coloured, and septate, usually with transverse divisions. *Grevillea, vol.* vii. *p.* 87.

2118. S. herbarum * Pers. *C. Hbk. No.* 2692.

On leaves of grasses and herbaceous stems.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe. America.

2119. S. infectoria * Fckl. *C. Hbk. No.* 2693.

On dead reed. Summer.

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

CCCCVII. SPHAERELLA De Not.

2120. S. maculaeformis Pers. *C. Hbk. No.* 2742.

On dead leaves, sycamore, &c.

East.	Tweed	——	Tay	Dee	Moray	——
West.	——	Clyde	——	——		

England. Europe.

2121. S. punctiformis* Pers. *C. Hbk. No.* 2750.

On dead leaves, beech, &c.

East.	Tweed	Forth	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

2122. S. punctoidea Cooke. *C. Hbk. No.* 2751.

On oak leaves.

East.	Tweed	——	——	——	——	——
West.	——	——	——	——		

Jedburgh. A. Jerdon.
England.

2123. S. myriadea* D. C. *C. Hbk. No.* 2752.

On dead oak leaves.

East.	——	——	Tay	——	Moray	——
West.	——	——	——	——		

England. Europe. America.

2124. S. pinastri Duby. *C. Hbk. No.* 2757.

On dead leaves of silver fir.

East.	Tweed	Forth	——	——	——	——
West.	——	——	Argyle	——		

England. Europe.

2125. S. vaccinii Cooke. *Hbk. No.* 2759.

On *Vaccinium*.

East.	——	——	Tay	——	——	——
West.	——	——	——	——		

Rannoch. Dr. B. White.
England. Europe.

2126. S. rusci De Not. *C. Hbk. No.* 2762.
On dead leaves of *Ruscus aculeatus.* Spring.
East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

2127. S. Leightoni Berk. *C. Hbk. No.* 2764.
On dead leaves of *Linnæa borealis.* Autumn. 2000 ft.
East. —— —— Tay —— —— ——
West. —— —— —— ——
Clova, Glen Doll, 1837. Rev. W. A. Leighton.

2128. S. pteridis Desm. *C. Hbk. No.* 2765.
On dead fronds of *Pteris.* Summer.
East. —— —— —— —— Moray ——
West. —— —— —— ——
Altyre. Rev. J. Keith.
England. Europe.

2129. S. rumicis * Desm. *C. Hbk. No.* 2769.
On living leaves of *Rumex.* Spring—Autumn.
East. Tweed Forth Tay Dee Moray ——
West. Solway Clyde Argyle Ross
England. Europe.

2130. S. recutita Fr. *C. Hbk. No.* 2772.
On grasses.
East. Tweed —— —— —— —— ——
West. —— —— —— ——
Berwick. Eng. Fl.
England. Europe.

2131. S. lineolata De Not. *C. Hbk. No.* 2773.
On *Ammophila arundinacea.*
East. —— —— Tay —— —— ——
West. —— —— —— ——
Sands of Barrie. Gardiner.
Europe. Arctic.

2132. S. hederae Sow. *C. Hbk. No.* 2774.
On dead ivy leaves.
East. —— —— —— —— —— ——
West. —— —— Argyle ——
Appin. Carmichael.
England. Europe.

2133. S. Ostruthii Fr. *C. Hbk. No.* 2776.

On living leaves of *Angelica sylvestris*. Autumn.

East. Tweed Forth Tay —— —— ——
West. —— —— —— ——
England. Europe.

2134. S. brachytheca Cooke. *Grevillea*, vii. *p.* 88.

Spots orbicular, whitish, surrounded by a dark line; perithecia punctiform, collected towards the centre of the spots; asci clavate or ovate; sporidia subfusiform, straight or curved, uniseptate, hyaline, ·014–·015 × ·003 mm.

On the upper surface of living leaves of *Vaccinium vitis-idæa*. Aug. Common.

East. —— —— —— —— Moray ——
West. —— —— —— ——
Forres. Rev. J. Keith.

CCCCVIII. GNOMONIA Not.

2135. G. coryli Batsch. *Sphæria, C. Hbk. No.* 2736.

On living leaves of hazel. Autumn.

East. Tweed Forth —— —— Moray ——
West. —— —— —— ——
England. Europe.

2136. G. tubaeformis Tode. *Sphæria, C. Hbk. No.* 2738.

On dead leaves of alder, &c. Autumn.

East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe. America.

2137. G. gnomon Tode. *Sphæria, C. Hbk. No.* 2739.

On dead leaves of hazel.

East. Tweed Forth —— —— —— ——
West. —— —— —— ——
England. Europe. America.

2138. G. setacea* Pers. *Sphæria, C. Hbk. No.* 2740.

On fallen sycamore and beech leaves.

East. Tweed —— Tay —— Moray ——
West. —— —— Argyle ——

Var. **petiolae** and Var. **epiphyllae.** Rev. J. Fergusson.
England. Europe. America.

CCCCIX. VENTURIA De Not.

2139. V. Dickiei De Not. *C. Hbk. No.* 2778.

On leaves of *Linnæa borealis.* Autumn. 2000 ft.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Aberdeenshire. Prof. Dickie. Clova, Glen Doll. Rev. W. A. Leighton, &c.

2140. V. chaetomium De Not. *C. Hbk. No.* 2779. *B. & Br. No.* 620, *t.* 9, *f.* 3.

On dead leaves of *Carex pendula.* Spring.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Greeshop. Rev. J. Keith.
England. Europe.

2141. V. ilicifolia Cooke. *Hbk. No.* 2782.

On holly leaves. Summer.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Sluie. Rev. J. Keith.
England.

2142. V. alchemillae* B. & Br. *No.* 1493. *Stigmatea* Grev. *C. Hbk. No.* 2796.

Perithecia minute, crowded in small, jet-black, stellate spots; asci short lanceolate; sporidia shortly fusiform, uniseptate, narrow, ·0005 inch long.

On leaves of *Alchemilla.* Summer. 2500 ft.

East. Tweed Forth Tay —— Moray ——
West. —— —— —— ——

England. Europe.

2143. V. atramentaria Cooke. *Scot. Nat., March* 1872. *Grevillea*, i. *p.* 175.

Hypophyllous, gregarious, forming irregular patches upon discoloured spots; perithecia subglobose, clad with short, dense, patent hairs, black; asci cylindrical; sporidia uniseriate, elliptic (probably septate when mature).

On living leaves of *Vaccinium uliginosum*. 3000 ft.

East. —— —— Tay Dee —— ——
West. —— —— —— ——

Lochnagar. Loch Tilt. Dr. B. White.

CCCCX. PYRENOPHORA Fr.

2144. P. phaeocomes* Fr. *C. Hbk. No.* 2785.

On withered grass. Summer—Autumn.

East. Tweed Forth Tay Dee —— ——
West. —— —— —— ——

England. Europe.

Order XXXII.—TUBERACEI.

CCCCXI. TUBER Mich.

2145. T. aestivum Vitt. *C. Hbk. No.* 2236.

In garden ground.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Forfar. Don. Forfarshire Flora.
England. Europe.

CCCCXII. CHOIROMYCES Vitt.

CCCCXIII. AMYLOCARPUS Curr.

CCCCXIV. PACHYPHLOEUS Tul.

CCCCXV. STEPHENSIA Tul.

CCCCXVI. HYDNOTRYA B. & Br.

CCCCXVII. HYDNOBOLYTES Tul.

CCCCXVIII. SPHAEROSOMA Kl.

CCCCXIX. BALSAMIA Vitt.

CCCCXX. GENEA Vitt.

CCCCXXI. ELAPHOMYCES Nees.

2146. E. variegatus * Vitt. *C. Hbk. No.* 2260.

In mixed woods. Summer—Autumn.

East. Tweed —— Tay Dee Moray ——
West. —— —— —— ——

England. Europe.

2147. E. granulatus * Fr. *C. Hbk. No.* 2261.

In mixed woods. Autumn.

East. —— —— Tay —— —— ——
West. —— —— —— ——

England. Europe. America.

ADDENDA.

Page 63.—NAUCORIA.

338a. A. myosotis Fr. *Hym. Eur. p.* 261.

Pileus slightly fleshy, convexo-plane, somewhat umbonate, pelliculoso-viscous, colour indefinite and changing, olivaceous, fuscous-green, becoming yellowish; stem fistulose, slender, *pallid, with fibrillæ* which become black in moist places, or *sheathed with scales;* gills adnato-decurrent, somewhat distant, at length brown-ferruginous, with a white *serrated edge.*

On grassy sward in fir wood. Aug.

East. —— —— —— —— Moray ——
West. —— —— —— ——

Strathspey. Rev. J. Keith.
Europe.

Page 81.—COPRINUS.

434a. C. nycthemerus * Fr. *C. Hbk. No.* 473.

On dung. Aug.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis Castle Park. J. S.
England. Europe. America.

Page 145.—TRAMETES.

776a. T. Bulliardi * Fr. *Hym. Eur. p.* 584. *Boletus suaveolens* Bull.

Pileus corky, *flattened,* even, *smooth, white becoming fuscous, at length zoned;* pores somewhat rounded, very deep, unequal, pallid, then *rufescent.* Odour sweet.

On dead stump. Aug. Very rare.

East. —— —— Tay —— —— ——
West. —— —— —— ——

Glamis, Hunter's Hill, 1879. J. S.
Europe.

Mr. Berkeley coincides with Persoon in regarding it rather as a *Dædalia.*

Page 159.—THELEPHORA.

Sub Thelephora Palmata, add Solway.

Page 199.—ENERTHENEMA.

1050a. E. papillata Pers. *R. Mon.* 209. *C. Myxo. p.* 51. *Stemonitis papillata, Eng. Fl. p.* 317. *E. elegans* Bowm.

On rotten wood. Aug.

East. —— Forth —— —— Moray ——
West. —— —— —— ——

Edinburgh. Greville. Rothiemurchus, 1879. Rev. J. Keith.

England. Europe.

Being uncertain of the identity of the English Flora plant, I had omitted this species. Mr. Keith's discovery of it sets at rest any doubt as to its being British.

Page 241.—PUCCINIA.

1261a. P. umbilici Guep. *C. Hbk. No.* 1504.

On *Cotyledon umbilicus.* Aug.

East. —— —— —— —— —— ——
West. —— Clyde —— ——

Tighnabruaich. Dr. B. White.

England. Europe.

Page 308.—PEZIZA.

5.—ENCÆLIA.

This section does not accord well with Aleuria. I retain it provisionally.

1588a. P. fascicularis* A. & S. *C. Hbk. No.* 2009.

On mountain ash, and Prunus *padus.*

East. —— —— Tay —— Moray ——
West. —— —— —— ——

England. Europe.

Var. **repagulis** Cooke. On fir of old sheep-fence. 2800 ft. Clova. J. S.

1588b. P. furfuracea* *C. Hbk. No.* 2010.

On alder. Autumn.

East. Tweed —— Tay Dee —— ——
West. —— —— —— ——

England. Europe.

Page 313.—PEZIZA.

1615a. P. comitessae Cooke. *Grevillea, vol.* iv. *p.* 111.

Cæspitose, or single and gregarious, bright golden-yellow, externally paler and tomentose, stipitate, common stem branching below; cups at first clavate, then expanded and cupulate; asci cylindrical, ·05 × ·006 mm.; sporidia minute, linear, straight or curved, ·006–·0075 mm. long; paraphyses filiform.

The branching stem resembles that of *P. pygmea*, to which this species is allied; the tufts contain from 2 to 4 cups proceeding from a common stem or sometimes single.

On a fallen tree. Sept.

East.	——	——	Tay	——	——	——
West.	——	——	——	——

Dupplin Castle, 1875. Dr. M. C. Cooke.

Page 322.—PEZIZA.

1663a. P. vinosa* A. & S. *C. Hbk. No.* 2097.

On dead branches. Spring.

East.	Tweed	——	Tay	Dee	——	——
West.	——	——	——	——

England. Europe. America. Ceylon.

CORRIGENDA.

PAGE

109, No. 580—*Add* "Europe."
126, No. 669—*For* "*Fr.*" *read* "Fr."
129, No. 689—*For* "Argyle" *read* "Clyde."
143, No. 770—*Add* "Europe."
154, No. 823—*For* "Johnstonii" *read* "Johnstoni."
157, No. xxxix.—*After* "Odontia" *add* "Fr."
161, No. 855—*Delete* "Europe."
197, No. 1041—*Add* "Europe."
200, No. 1055—*Add* "England.
202, No. cxvi.—*For* "Syphoptychium" *read* "Siphoptychium."
207, No. cxxxiii.—*For* "Thelobolus" *read* "Thelebolus."
208, &c.—*For* "Sphaeronomei" *read* "Sphaeronemei."
210, No. cxxxix.—*For* "Actynothyrium" *read* "Actinothyrium."
213, No. cxlvii.—*For* "Dilosphosphora" *read* "Dilophospora."
220, No. clvii.—*For* "Aschochyta" *read* "Ascochyta."
223, No. 1172—*For* "Johnstonii" *read* "Johnstoni."
224, &c.—*For* "Melanconei" *read* "Melanconici."
294, &c.—*For* "Ellvellacei" *read* "Elvellacei."
301, No. 1552—*For* "D. R. & M." *read* "DR. & M."
356, No. cccIxvii.—*For* "Mycrothyrium" *read* "Microthyrium."
392, No. 2050—*For* "Ces. de Not." *read* "Ces. & De Not."

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